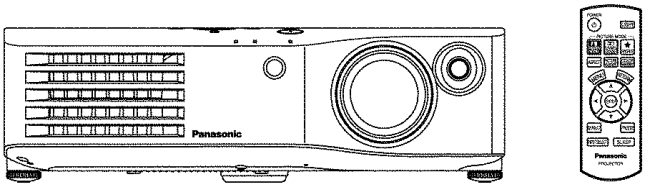
ORDER NO. VED0609373C0
D10

Service Manual

LCD Projector

PT-AX100U
PT-AX100E



Panasonic

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The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service Manual.

Specifications

Power supply:
100 V - 240 V AC, 50 Hz / 60 Hz
Power consumption:
290W [During standby (when fan is stopped): Approx. 0.08 W]
Amps:
3.5 A - 1.5 A
LCD panel:
Panel size (diagonal): 0.7 type (17.78 mm)
Aspect ratio: 16:9
Display method: 3 transparent LCD panels (RGB)
Drive method: Active matrix method
Pixels: 921 600 (1 280 × 720) × 3 panels
Lens:
Manual zoom (2x) / Manual focus
F 1.9 - 3.1, f 21.7 mm - 43.1 mm
Lamp:
UHM lamp (220 W)
Luminosity:
2 000 lm
Scanning frequency (for RGB signals):
Horizontal scanning frequency: 30 kHz - 70 kHz
Vertical scanning frequency: 50 Hz - 87 Hz
Dot clock frequency: 150 MHz or less
YP_BP_R signals:
525i (480i), 525p (480p), 625i (576i), 625p (576p), 1 125 (1 080)/60i, 1 125 (1 080)/50i, 1 125 (1 080)/24p, 750 (720)/60p, 750 (720)/50p, 1 125 (1 080)/50p, 1 125 (1 080)/60p
Color system:
7 (NTSC / NTSC 4.43 / PAL / PAL-M / PAL-N / PAL60/ SECAM)
Projection size:
1 016 mm - 5 080 mm
Throw distance:
1.2 m - 12.4 m
Screen aspect ratio:
16:9
Installation:
Front / Rear / Ceiling / Desk (Menu selection method)
Connectors:
S-VIDEO IN: Single-line, Mini DIN 4-pin
Y 1.0 V [p-p], C 0.286 V [p-p], 75 Ω,
VIDEO IN: Single-line, RCA pin jack
1.0 V [p-p], 75 Ω
PC IN:
RGB: Single-line, D-sub HD 15-pin (female)
R.G.B: 0.7V [p-p], 75Ω
G.SYNC: 1.0 V [p-p], 75Ω
HD/SYNC: TTL high impedance, automatic positive/negative polarity compatible
VD: TTL high impedance, automatic positive/negative polarity compatible
COMPONENT IN :
Y, P_B/C_B, P_R/C_R: Single-line, RCA pin jack × 3
Y: 1.0 V [p-p] (Including sync), 75Ω
P_B, P_R (C_B, C_R): 0.7 V [p-p], 75Ω
HDMI IN : Single-line, 19-pin HDMI connector
SERIAL: DIN 8-pin RS-232C compatible
Cabinet:
Molded plastic (ABS / PC)
Dimensions:
Width: 395 mm
Height: 112 mm
Length: 300 mm (Not including lens)
Weight:
4.9 kg
Operating environment:
Temperature: 0° C - 40° C
(When "ALTITUDE" is set to "HIGH": 0° C - 35° C)
Humidity: 20 % - 80 % (no condensation)
Certifications:
PT-AX100U: UL60950-1, C-UL, FCC Class B
PT-AX100E: EN60950-1, EN55022, EN61000-3-2, EN61000-3-3, EN55024

＜Remote control unit＞
Power supply:
3 V DC (AA battery × 2)
Operating range:
Approx. 7 m
(when operated directly in front of signal receptor)
Weigh:
125 g (including batteries)
Dimensions:
Width: 48 mm
Height: 28.35 mm (Not including projecting parts)
Length: 138 mm
Accessories:

Remote control unit (N2QAYB000064):		1
AA batteries for remote control unit (×2)**:**		1
Power cord:	**PT-AX100U:** K2CG3FR00001	1
	PT-AX100E: K2CT3FR00003 (U.K)	1
	: K2CM3FR00002 (continental)	1

Options:

Ceiling bracket:	ET-PKX100
Projection Screen:	ET-SRW90CT
Serial adapter:	ET-ADSER

(DIN 8-pin/D-sub 9-pin)

- Specifications are subject to change without notice.
- Weight and dimensions shown are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Trademark Acknowledgements

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- S-VGA is a registered trademark of the Video Electronics Standards Association.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- The font used in the on-screen displays is a Ricoh bitmap font, which is manufactured and sold by Ricoh Company, Ltd.

All other trademarks are the property of the various trademark owners.

Precaution

If using this projector at high elevations (above 1 400 m), set the ALTITUDE to HIGH. (Refer to "Option settings" in Operating Instructions.)
Failure to observe this may cause malfunctions.
Never use this projector at an elevation of 2 700 m or higher.
Using this projector at high elevations, consult your dealer or Authorized Service Center about preparations.

Note

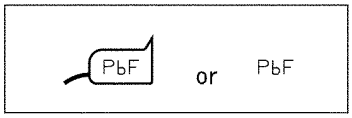
This projector has the demonstration mode that aims at the effect of the display in the shop. When Panasonic logo and the model name (PT-AX100*) are displayed, and they go round the four corners of the screen while slowly blinking, the projector is in the demonstration mode. If it is in the demonstration mode, cancel it before returning the customer the projector by the following methods.
Press "RETURN" button on the main unit or remote control unit 3 seconds or longer.

About lead free solder (PbF)

This projector is using the P.C.Board which applies lead free solder. The use of lead free solder is recommended from the standpoint of antipollution for the global environment in service.
Notes:

- Lead free solder: Sn-Ag-Cu (tin, silver and copper) has a higher melting point (approx. 217℃) than standard solder. Typically, the melting point is 30℃ to 40℃ higher. When servicing, use a high temperature soldering iron with temperature limitation function and set it to 370±10℃.
- Be precautions about lead free solder: Sn-Ag-Cu (tin, silver and copper) will tend to splash when heated too high (approx. 600℃ or higher).
- Use lead free solder for the P.C.Board (specified on it as "PbF") which uses lead free solder. (When you unavoidably use lead solder, use lead solder after removing lead free solder. Or be sure to heat the lead free solder until it melts completely, before applying lead solder.)
- After soldering to double layered P.C.Boards, check the component side for excess solder which may flow onto the opposite side.

About the identification of the lead free solder P.C.Board
For the P.C.Board which applies lead free solder, the symbol as shown in the figure below is printed or stamped on the surface or the back of P.C.Board.



For US

IMPORTANT SAFETY NOTICE

There are special parts used in Panasonic LCD Projectors which are important for safety. These parts are shaded on the schematic diagram. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY.

WARNING:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any unauthorized changes or modifications to this equipment will void the users authority to operate.

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1 Safety Precautions

1.1. General Guidelines

- For continued safety, no modification of any circuit must be attempted.
- Unplug the power cord from the power outlet before disassembling this projector.
- Use correctly the supplied power cord and must ground it.
- It is advisable to use an isolation transformer in the AC power line before the service.
- Be careful not to touch the rotation part (cooling fan, etc.) of this projector when you service with the upper case removed and the power supply turned ON.
- Observe the original lead dress during the service. If a short circuit is found, replace all the parts overheated or damaged by the short circuit.
- After the service, all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations must be properly installed.
- After the service, check the leakage current to prevent the customer from getting an electric shock.

1.2. Leakage Current Check

1. Prepare the measuring circuit as shown in Fig.1.

   Be sure to use a voltmeter having the performance described in Table 1.

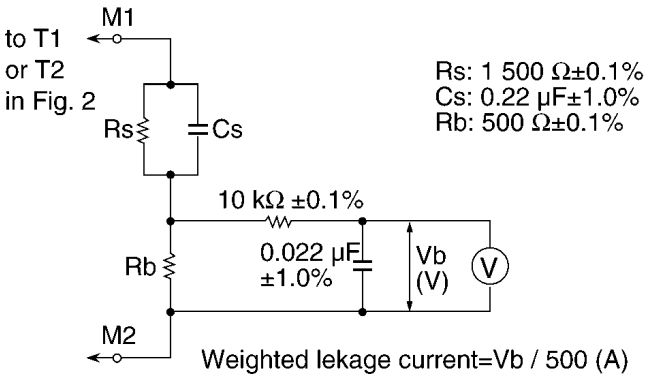


Fig. 1

	Performance
Voltmeter (rms reading)	Accuracy: ≤ 2% Input resistance: ≥ 1 MΩ Input capacitance: ≤ 200 pF Frequency range: 15 Hz to 1 MHz

Table 1

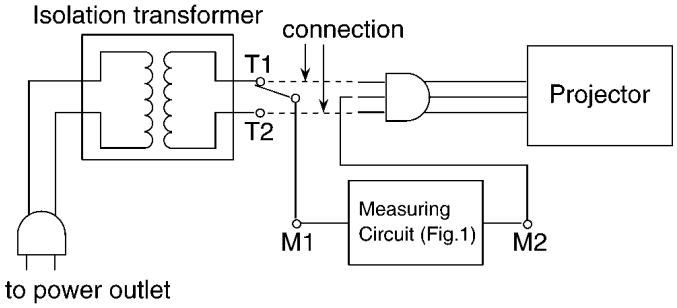


Fig. 2

2. Assemble the circuit as shown in Fig. 2. Plug the power cord in a power outlet.
3. Connect M1 to T1 according to Fig. 2 and measure the voltage.
4. Change the connection of M1 from T1 to T2 and measure the voltage again.
5. The voltmeter must read 0.375 V or lower in both of steps 3 and 4. This means that the current must be 0.75 mA or less.
6. If the reading is out of the above standard, the projector must be repaired and rechecked before returning to the customer because of a possibility of an electric shock.

1.3. UV Precaution and UHM Lamp Precautions

- Be sure to unplug the power cord from the power outlet when replacing the lamp.
- Because the lamp reaches a very high temperature during its operation, wait until it cools completely when replacing the Lamp Unit.
- The lamp emits small amounts of UV-radiation, avoid direct-eye contact with the light.
- The lamp unit has high internal pressure. If improperly handled, explosion might result.
- Because the high pressure lamp involves a risk of failure, never touch the lamp wire lead during the service. (See Fig. 3)

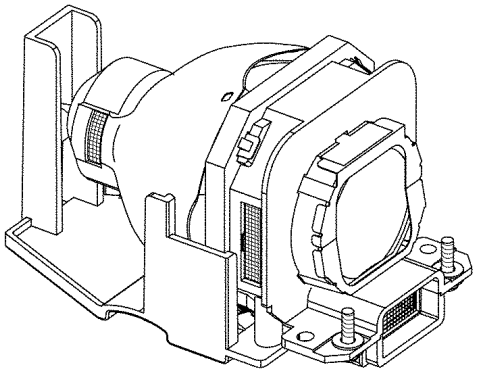


Fig.3

2 Ext Option

This projector has EXT OPTION in addition to standard on-screen menus.

・There are SELF CHECK and FLICKER ADJUST for service, etc.

2.1. Procedure to enter EXT OPTION

1. When the projector is power ON, press "POWER" button on the main unit or remote control unit to display "POWER OFF" confirmation screen.
2. Press the right-arrow " ▶ " button to select "CANCEL" in the "POWER OFF" confirmation screen.
3. On the main unit or remote control unit, press the buttons in order of up-arrow " ▲ ", down-arrow " ▼ ", up-arrow " ▲ ", down-arrow " ▼ " and "ENTER".

   (When the "ENTER" button is pressed, "EXT OPTION" menu is displayed.)

2.2. EXT OPTION Menu and Functions

EXT OPTION

FAN FULLMODE	OFF / ON
AUTO SETUP	NORMAL / SPECIAL
SELF CHECK	
FLICKER ADJUST	
525i SD	OFF / ON
525p OS	OFF / ON
HPLL	OFF / ON

・FAN FULLMODE

Setting the cooling fan motor rotation speed

– Switching ON "FAN FULLMODE", the rotation level of the fan becomes high-speed rotation (fixed). Moreover, when "FAN FULLMODE" is ON, changing "ALTITUDE" in OPTION becomes impossible (setting FAN FULLMODE is given priority more than ALTITUDE).

・AUTO SETUP

Setting AUTO SETUP mode

– NORMAL: To set the normal mode (the dot clock is adjusted strictly)

– SPECIAL: To set the special mode (the dot clock is adjusted roughly)

* Do not change the initial setting (NORMAL).

・SELF CHECK

To enter the self-check mode

・FLICKER ADJUST

To enter the flicker adjustment mode

・525i SD

When non-standard signal of 525i/625i is inputted (AV amplifier, etc.), synchronization might be disordered according to connected equipment. In this case, set 525i SD to ON.

・525p OS

When 525p/625p signal is inputted, reflection noise (vertical striated beat) might be generated according to connected equipment. In this case, set 525p OS to ON. However, the resolution decreases a little.

・HPLL

When non-standard signal of VIDEO/S-VIDEO is inputted (VTR, VHD, etc.), horizontal synchronization might be disordered according to connected equipment. In this case, set HPLL to OFF.

2.3. Canceling EXT OPTION

Press "MENU" button on the main unit or remote control unit.

3 Self-Check Mode

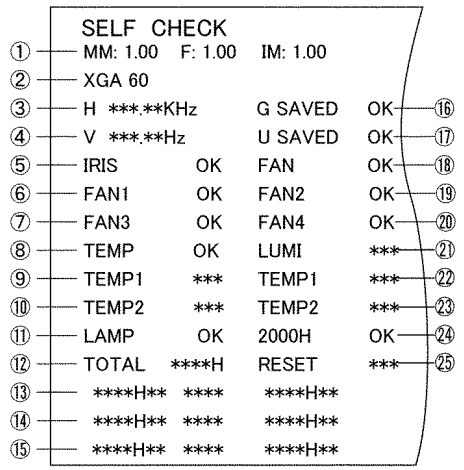
This mode is used to narrow down the location of the failure.

3.1. Procedure to enter the self-check mode

Select "SELF CHECK" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

3.2. Self Check Display and Contents

Display example



* This display is an example and the display contents depend on the input signal mode.

- The result of items "G SAVED" and "U SAVED", "OK" is displayed for OK and "NG" is displayed for NG.
- The result of items "FAN", "FAN1", "FAN2", "FAN3", "FAN4", "TEMP", "LAMP" and "2000H", the OK display becomes red characters when shutting down because abnormality happened last time.

	Display Contents	Remarks
①	Microcomputer / FPGA / IRIS Control Microprocessor Software Version Display *1	Microcomputer (IC1010), FPGA (IC1005) and IRIS control microprocessor (IC1133) software versions are shown from the left.
②	Signal Name	Different display according to the input signal
③	Horizontal Signal Frequency	RGB or YP_BP_R (YC_BC_R) signal reception only
④	Vertical Signal Frequency	RGB or YP_BP_R (YC_BC_R) signal reception only
⑤	Iris Abnormality Check	It is distinguished whether the iris operates normally.
⑥	FAN1 Error Information	FAN1 (Power fan) Error
⑦	FAN3 Error Information	FAN3 (Intake fan) Error
⑧	Temperature Abnormality Check	Cause of Lamp Malfunction
⑨	Thermosensor 1 A/D conversion value (0 - 255) *2	Current temperature around the LCD panel
⑩	Thermosensor 2 A/D conversion value (0 - 255) *2	Current temperature around the air intake slot (Detects air filter's choke, etc.)
⑪	Lamp Abnormality Check	Cause of Lamp Malfunction
⑫	Total Usage Time	Projector Cumulative Usage Time
⑬ ⑭ ⑮	Lamp ON - Cumulative Usage Time / Frequency / Cumulative Usage Time	Current / Second / First: Cumulative Usage Time (actual time), ON Frequency and Cumulative Usage Time (conversion time for 220 W) of the lamp are shown from the left.
⑯	Gamma Correction Data Check	It is distinguished whether gamma data is stored in the flash ROM.
⑰	Color Unevenness Correction Data Check	It is distinguished whether color unevenness correction data is stored in the flash ROM.
⑱	Fan Stop Check	Cause of Lamp Malfunction
⑲	FAN2 Error Information	FAN2 (Exhaust fan) Error
⑳	FAN4 Error Information	FAN4 (Lamp fan) Error
㉑	DAYLIGHT sensor A/D conversion value (0-1023)	Illuminance around the projector
㉒	Thermosensor 1 A/D conversion value (0 - 255) *2	Temperature around the LCD panel when the last thermal shutdown occurs
㉓	Thermosensor 2 A/D conversion value (0 - 255) *2	Temperature around the air intake slot when the last thermal shutdown occurs
㉔	Lamp - Judgment for Cumulative Usage more than 2 000 h *3	Judgment for Replacement Time of Lamp
㉕	Lamp - Reset Frequency of Cumulative Usage Time	Reset Frequency (0 - 255)

*1 FPGA (Field Programmable Gate Array)
LSI that is rewritable quickly while inspecting the program by system designer. (This will be able to reduce the development time.)

*2 When detected abnormal temperature (high temperature around the LCD panel, large difference between temperature at the air intake slot and temperature around the LCD panel), TEMP indicator turned on. If arriving at the critical temperature, the power supply will shut down automatically (thermal shutdown) and the indicator will flash.

*3 Warning of the lamp cumulative usage time and shutdown use the conversion time for 220 W.

3.3. Canceling the self-check mode

Press "MENU" button on the main unit or remote control unit.

4 Flicker Adjustment Mode

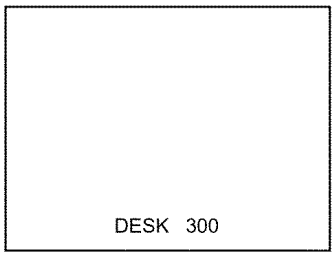
If replacing the optical parts (LCD Panel / LCD block) or A-P.C.Board of this projector, enter the flicker adjustment mode and minimize the flicker.

4.1. Procedure to enter the adjustment mode

Select "FLICKER ADJUST" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

"DESK setting (red)" is displayed when entering the adjustment mode.



Adjustment Display when DESK setting

4.2. Adjustment Display and Contents

- Setting value is increased and decreased with the right-arrow " ▶ " and left-arrow " ◀ " buttons.
  " ◀ ": Decrease, " ▶ ": Increase
  – Adjust the setting value to minimize the flicker on the screen.
  – Execute the adjustment by 6 patterns below.
- The pattern (adjustment display) is switched with the up-arrow " ▲ " and down-arrow " ▼ " buttons.
  " ▲ ": Forward direction, " ▼ ": Reverse direction
  – There are 6 patterns of "DESK setting (red)", "DESK setting (blue)", "DESK setting (green)", "CEILING setting (red)", "CEILING setting (blue)" and "CEILING setting (green)".
  – The setting value is saved into this projector when the pattern is switched.

4.3. Canceling the flicker adjustment mode

Press "MENU" button on the main unit or remote control unit.

Note:

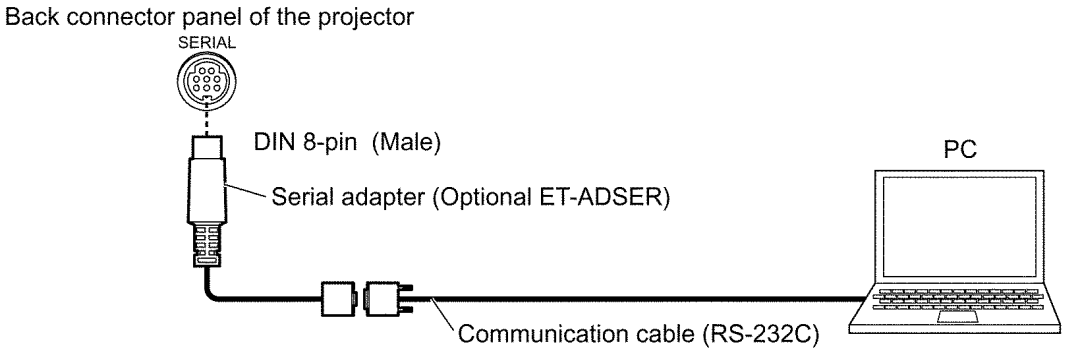
When "MENU" button is pressed, the setting value at that time is saved into this projector and the adjustment mode is canceled.

5 Using the SERIAL Connector

The serial connector which is on the back connector panel of the projector conforms to RS-232C standard. This projector can be controlled by a PC which is connected as shown in "5.1. Connection".

For controlling this projector by a PC, requires communication software on the market, and inputs control commands according to communication settings and basic format below.

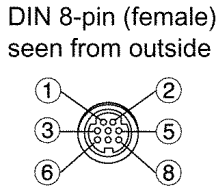
5.1. Connection



Note:

Use a proper communication cable which is suitable for the PC to connect the optional serial adapter, which is connected with SERIAL connector of this projector, and the PC.

5.2. Pin Layout and Signal Names for SERIAL Connector



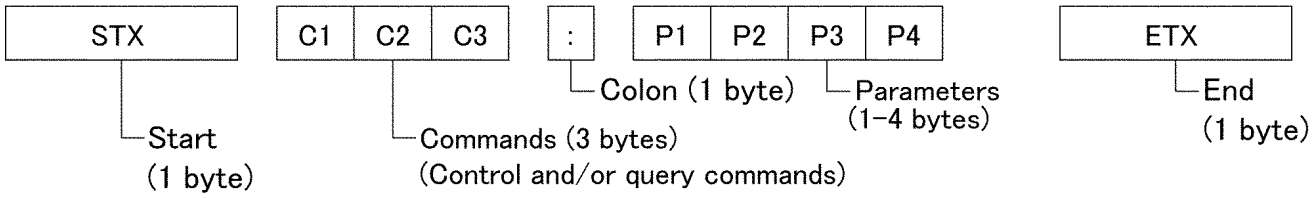
Pin No	Signal Name	Contents
3	RXD	Receive data
4	GND	Ground
5	TXD	Transmit data
1	---	Connected internally
2	---	
6	---	
7	---	NC
8	---	NC

5.3. Communication Settings

Signal Level	Contents		Description
Sync. method	Conforms to RS-232C standard	Asynchronous	Synchronizes every 1 character (8 bits)
Baud rate		9 600 bps	Data transfer speed
Parity		None	Error detection method
Character length		8 bits	Number of bit composing 1 character
Stop bit		1 bit	Uses stop bit when asynchronous method
X parameter		Not used	
S parameter		Not used	

5.4. Basic Format

The data sent from the PC to the projector is transmitted in the format shown below.



Notes:

- If sending multiple commands, check that a call back has been received from the projector for 1 command before sending the next command.
- When a command which does not require parameters is sent, the colon (:) is not required.

5.5. Control / Query Commands

Control Commands

Command Name (Parameter format is shown in < >)	Function / Contents	Call back from Projector (Parameter format is shown in < >)	Minimum Value of Parameter	Maximum Value of Parameter
PON *	POWER ON	PON	———	———
POF *	POWER OFF	POF	———	———
IIS :〈input signal〉	INPUT SELECT	IIS :〈input signal〉	———	———
OST	NORMAL	OST	———	———
OFZ :〈off_on〉	FREEZE	OFZ :〈off_on〉	0	1
OEN :	ENTER	OEN	———	———
VPM :〈picture mode〉	PICTURE MODE	VPM :〈picture mode〉	———	———
〈NOR〉	NORMAL	〈NOR〉	———	———
〈DYN〉	DYNAMIC	〈DYN〉	———	———
〈CN1〉	CINEMA1	〈CN1〉	———	———
〈CN2〉	CINEMA2	〈CN2〉	———	———
〈CN3〉	VIVID CINEMA	〈CN3〉	———	———
〈VID〉	VIDEO	〈VID〉	———	———
〈NAT〉	NATURAL	〈NAT〉	———	———
OMN	MENU	OMN		
OCU	CURSOR UP	OCU		
OCD	CURSOR DOWN	OCD		
OCL	CURSOR LEFT	OCL		
OCR	CURSOR RIGHT	OCR		
OOT :〈off_timer〉	OFF TIMER	OOT :〈off_timer〉	0	7
OSH *	SHUTTER	OSH		
OVM	PIC.MODE	OVM		
VS1	ASPECT	VS1		
OBK	RETURN	OBK		

* Do not transmit the PON, POF and/or OSH commands continuously in a short time. The lamp may be damaged and/or cause malfunctions.

Query Commands

Query Command	Contents	Call back from Projector (Parameter format is shown in 〈 〉)
QPW	POWER CONDITION	〈power condition〉
QIN	INPUT SIGNAL	〈input signal〉
QPM	PICTURE MODE	〈NOR〉=NORMAL 〈DYN〉=DYNAMIC 〈CN1〉=CINEMA1 〈CN2〉=CINEMA2 〈CN3〉=VIVID CINEMA 〈VID〉=VIDEO 〈NAT〉=NATURAL
QFZ	FREEZE	〈off_on〉
QOT	OFF TIMER	〈off_timer〉
QSH	SHUTTER	〈off_on〉

Parameters

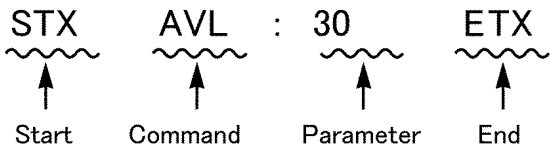
Parameter Format	Parameter Size (Byte)	Parameter Definition
〈off_on〉	1	0=OFF, 1=ON
〈input signal〉	3	VID = VIDEO, SVD = S-VIDEO, RG1 = PC, YUV = YP_BP_R , HDM = HDMI
〈power condition〉	3	000=Power OFF, 001=Power ON
〈off_timer〉	1	0 = OFF, 1 = 60 min, 2 = 90 min, 3 = 120 min, 4 = 150 min, 5 = 180 min, 6 = 210 min, 7 = 240 min

* If an incorrect command is sent from the PC, the "ER401" command will be sent from the projector to the PC.

[Example]

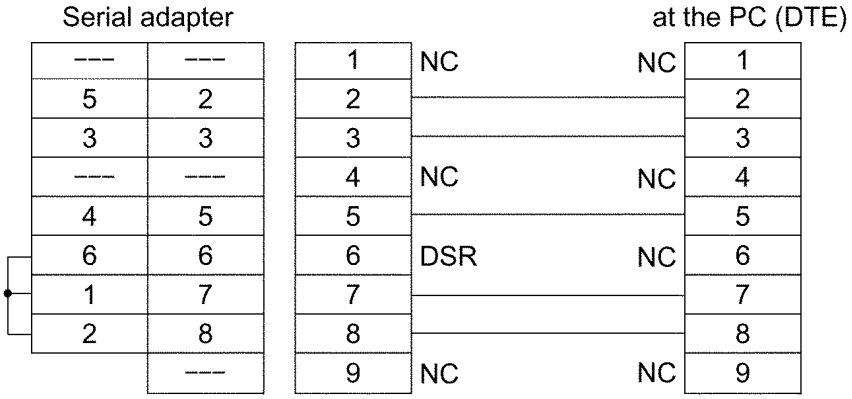
When controls the audio volume to +30 by a PC

(Sends commands as the following:)



・When a command which does not require parameters is sent, the colon (:) is not required.

5.6. Communication Cable Specifications



---	---	1	NC	NC	1
5	2	2			2
3	3	3			3
---	---	4	NC	NC	4
4	5	5			5
6	6	6	DSR	NC	6
1	7	7			7
2	8	8			8
	---	9	NC	NC	9

5.7. Signal Selector Connecting Cable Specifications

When connecting to a signal selector (ex. TW-SWS62J), use a cable with specifications below.

Connecting method: Connects a video signal cable from the signal selector to "VIDEO IN", and an RGB signal cable to "PC IN".

At the signal selector D-sub 9p (male)		At the serial adapter (DCE) D-sub 9p (male)		Serial adapter	
Signal Name	Pin No.	Pin No.	Signal Name	Pin No. (cable side)	Pin No. (projector side)
NC	1	1	NC	---	---
RD Receive data	2	2	SD Transmit data	2	5
SD Transmit data	3	3	RD Receive data	3	3
NC	4	4	NC	---	---
GND Ground	5	5	GND Ground	5	4
NC	6	6	DSR	6	6
RS Transmit request	7	7	CS Transmit permission	7	1
CS Transmit permission	8	8	RS Transmit request	8	2
NC	9	9	NC	---	

Note:

Set VP control terminal switch of the signal selector to VP TYPE "B".

6 Disassembly Instructions

Warning:

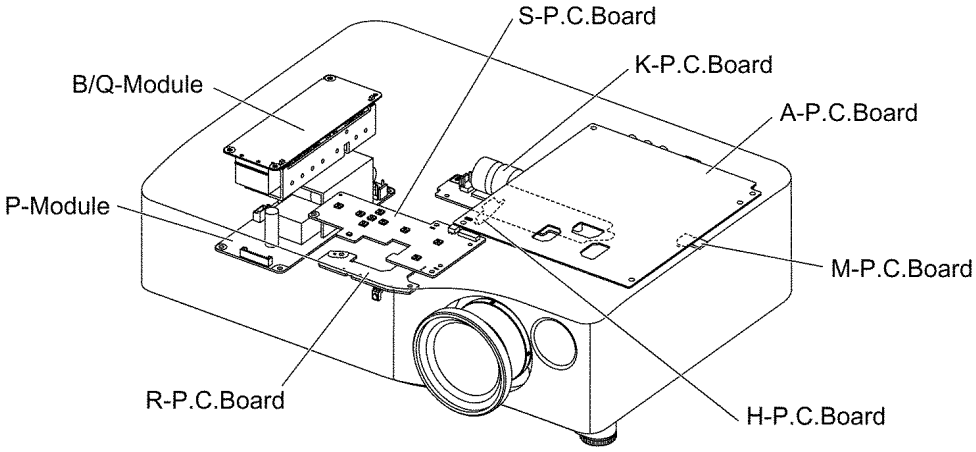
- Be sure to unplug the power cord from the power outlet before disassembling this projector.

Caution:

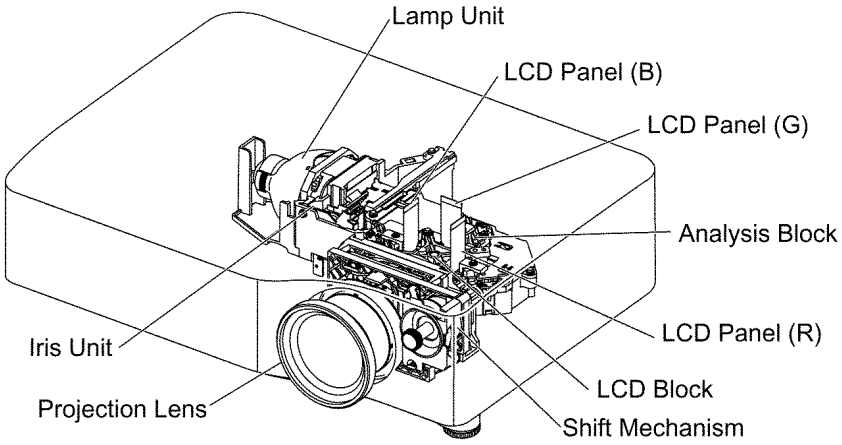
- While turning over a printed circuit board, be sure to put a insulating material under it to prevent a short circuit.
- Printed circuit boards and wires must not be pulled forcibly, but be handled carefully.
- Connectors also must be handled carefully.
- When reassembling, replace used adhesive tape with new one (Do not re-use used tape).
- After repairing this projector, be sure to put back the wires and connectors to the original condition.

6.1. Printed Circuit Board and Main Parts Location

Electrical Parts

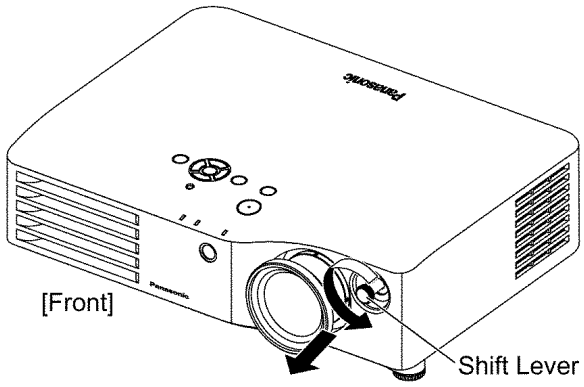


Optical Parts

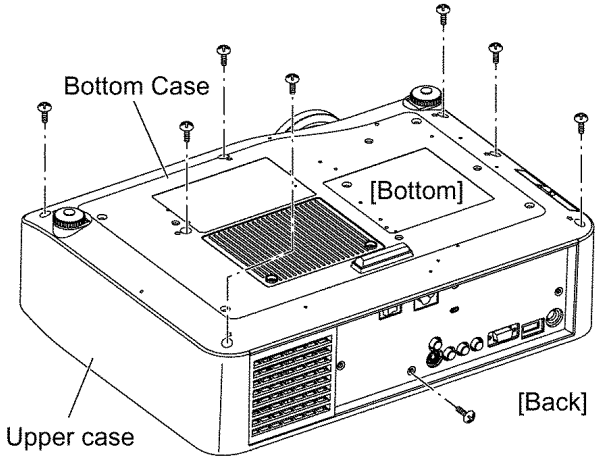


6.2. Removal of Upper Case

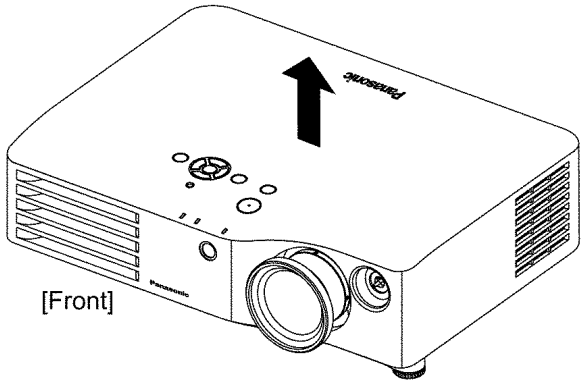
1. Turn counterclockwise the shift lever by about one and a half rotations (540 °) from the position in which it is locked, and pull it forward to remove.



2. Turn the projector upside down.
3. Unscrew the 8 screws.

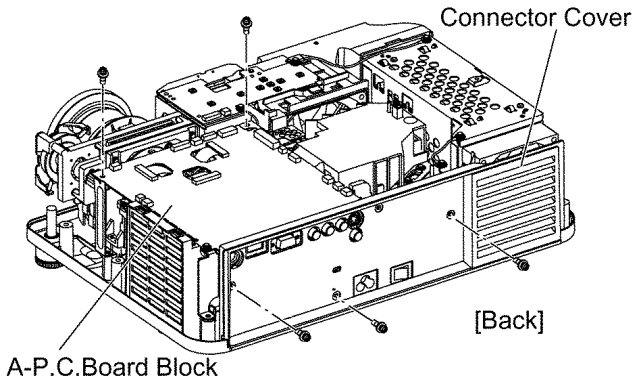


4. Return the projector to the normal position.
5. Remove the upper case.

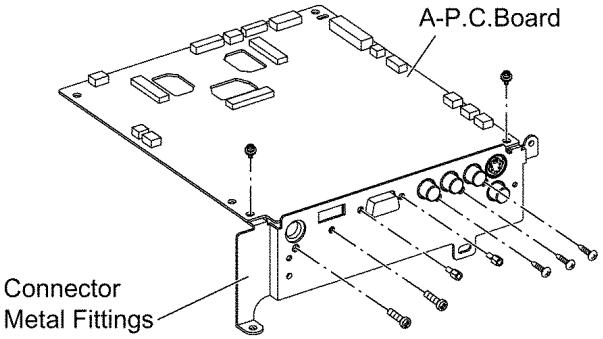


6.3. Removal of A-P.C.Board

1. Remove the upper case according to the section 6.2. "Removal of Upper Case".
2. Unscrew the 3 screws and remove the connector cover.
3. Disconnect all connectors to/from the A-P.C.Board.
4. Unscrew the 2 screws and remove the A-P.C.Board block.



5. Unscrew the 9 screws and remove the connector metal fittings.

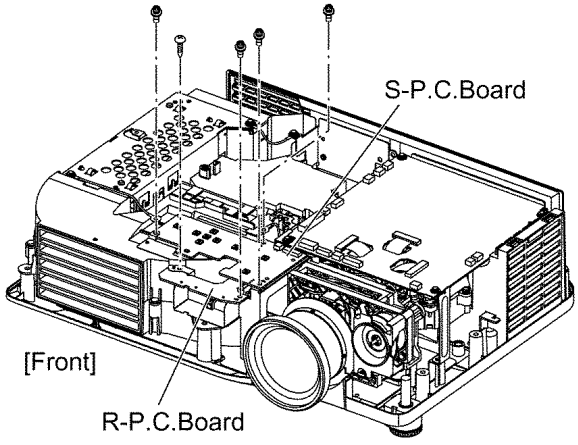


6.4. Removal of R-P.C.Board and S-P.C.Board

1. Remove the upper case according to the section 6.2. "Removal of Upper Case".
2. Unscrew the 5 screws and remove the R-P.C.Board and S-P.C.Board.

Note:

- They are connected with the connector. Be careful handling.

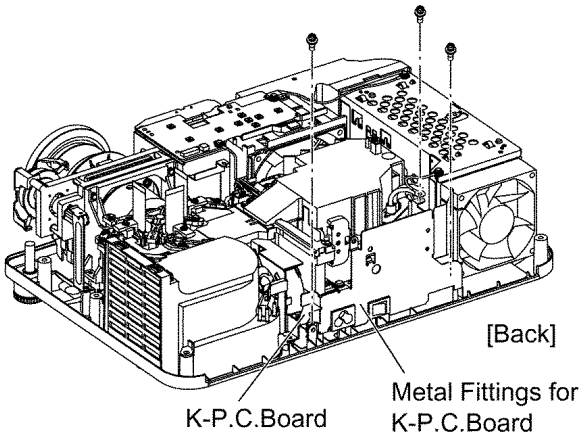


3. Disconnect the connector and separate them.

6.5. Removal of K-P.C.Board

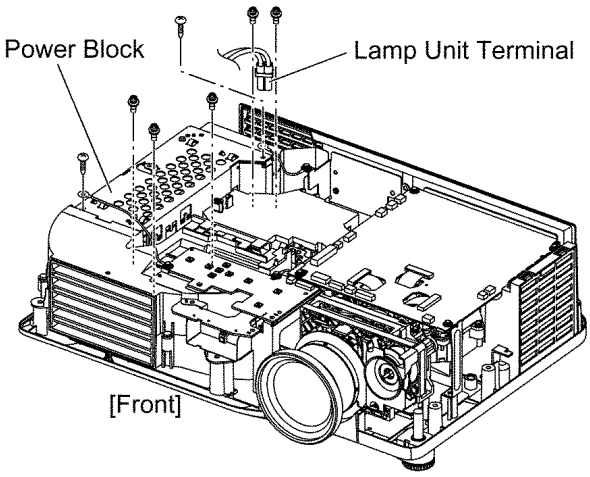
1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 6.3. "Removal of A-P.C.Board".
2. Unscrew the 1 screw and release the grounding terminal.

3. Unscrew the 2 screws and remove the K-P.C.Board block.

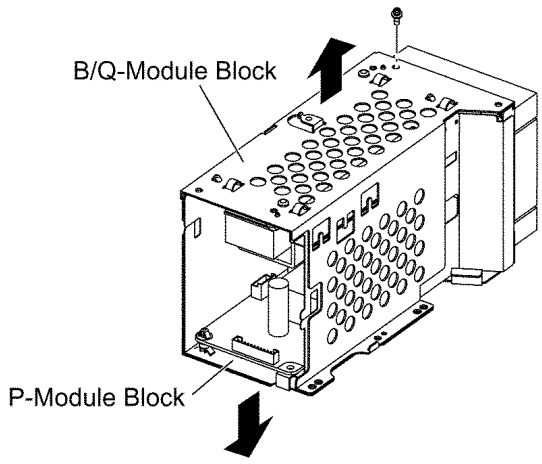


6.6. Removal of B/Q-Module

1. Remove the upper case according to the section 6.2. "Removal of Upper Case".
2. Unscrew the 2 screws and remove the lamp unit terminal.
3. Unscrew the 2 screws and release the 2 grounding terminals.
4. Unscrew the 3 screws and remove the power block (B/Q-Module and P-Module).

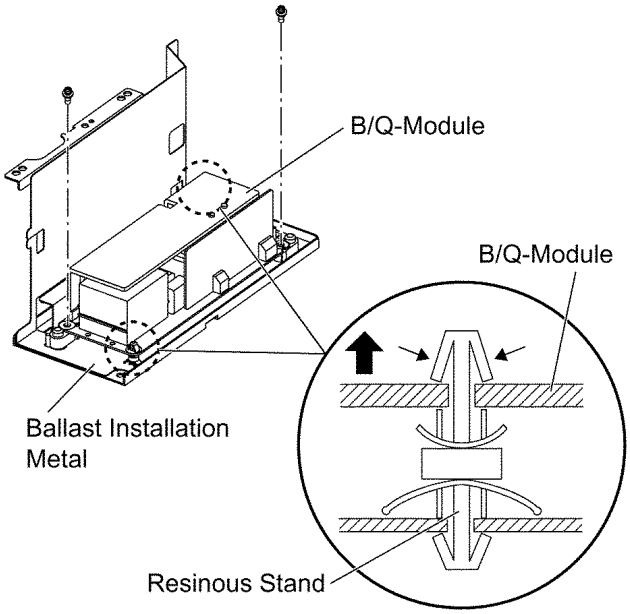


5. Unscrew the 1 screw and separate the B/Q-Module block and P-Module block.



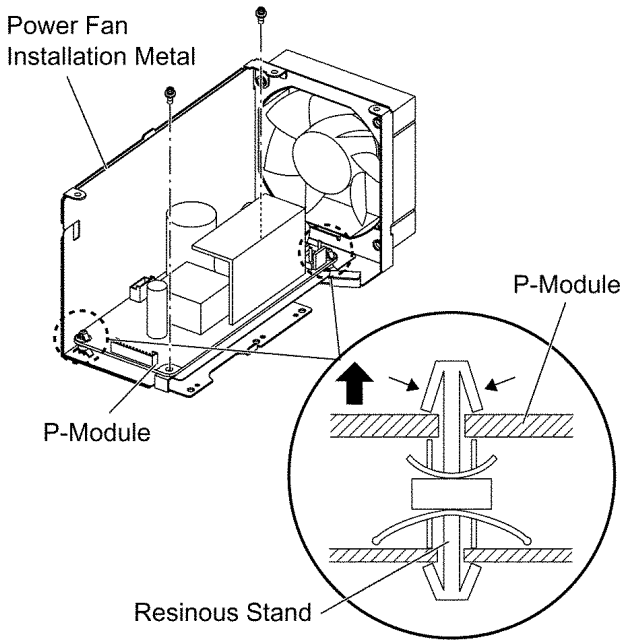
6. Unscrew the 2 screws.

7. While pressing to shut each hook of the 2 resinous stands, remove the B/Q-Module.



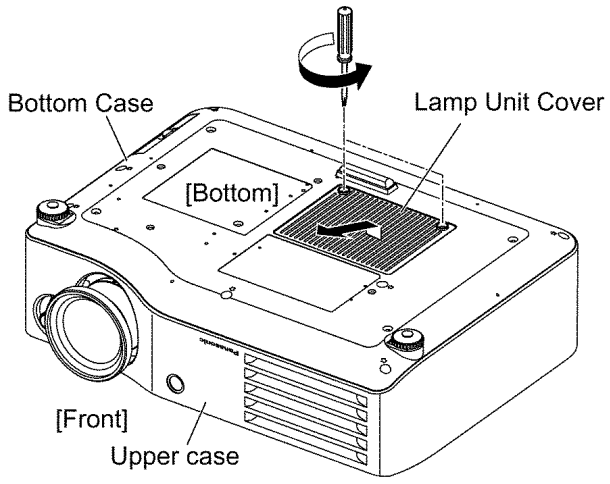
6.7. Removal of P-Module

1. Remove the P-Module according to the steps 1 through 5 in the section 6.6. "Removal of B/Q Module".
2. Unscrew the 2 screws.
3. While pressing to shut each hook of the 2 resinous stands, remove the P-Module.

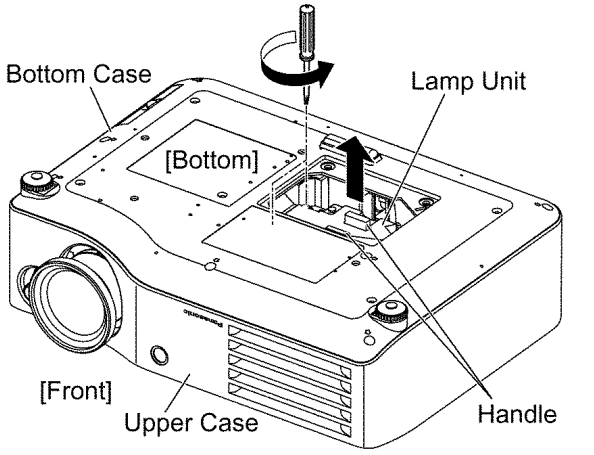


6.8. Removal of Lamp Unit

1. Turn the projector upside down.
2. Loosen the 2 screws until they idle and remove the lamp unit cover.



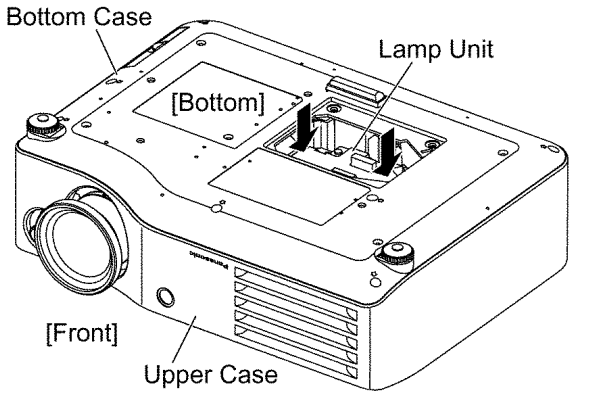
3. Loosen the 2 screws until they idle, remove the lamp unit with the handle.



Note:

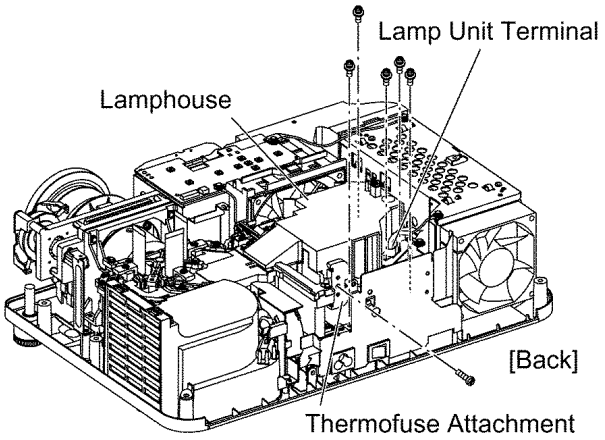
- When installing the lamp unit (or a new one) in the main unit, place it in a specified position and press the connector side and the opposite side of the lamp unit (arrow positions shown in the figure below), and confirm the lamp unit is inserted securely.

  Then, tighten the 2 screws fixing the lamp unit, and attach the lamp unit cover.

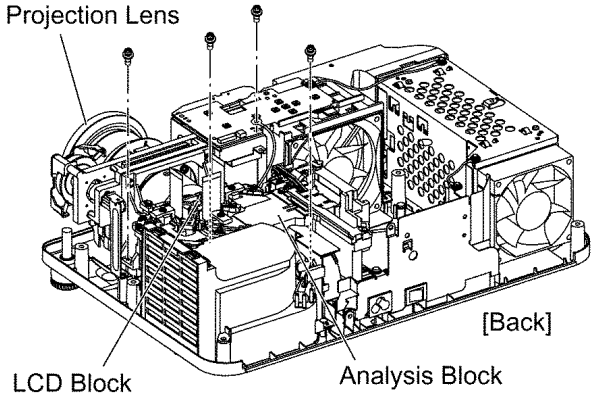


6.9. Removal of Analysis Block

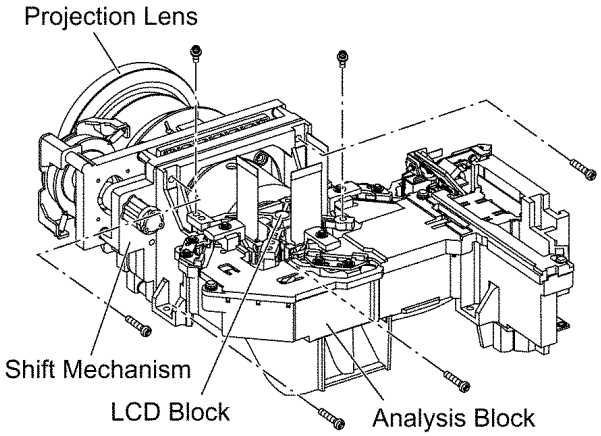
1. Remove the lamp unit according to the section 6.8. "Removal of Lamp Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 6.3. "Removal of A-P.C.Board".
3. Unscrew the 1 screw and remove the thermofuse attachment.
4. Unscrew the 2 screws and remove the lamp unit terminal.
5. Unscrew the 3 screws and remove the lamphouse.



6. Unscrew the 1 screw and release the grounding terminal.
7. Unscrew the 3 screws and remove the block of Analysis Block, LCD Block and Projection Lens Block.



8. Unscrew the 2 screws and remove the LCD block.
9. Unscrew the 4 screws and remove the projection lens block (with shift mechanism).



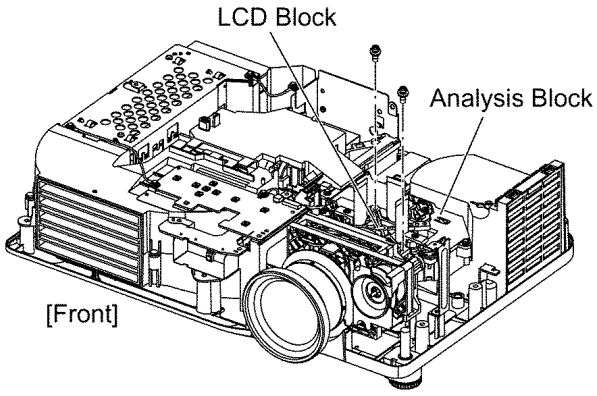
6.10. Removal of LCD Block

1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 6.3. "Removal of A-P.C.Board".

2. Unscrew the 2 screws and remove the LCD block.

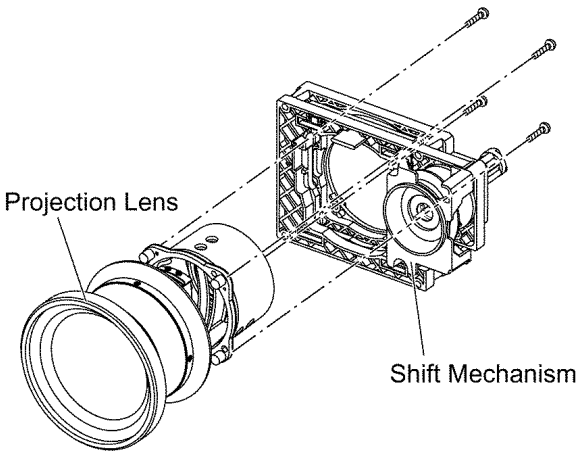
Note:

- Be careful not to touch the surface of prism and LCD panel.



6.11. Removal of Projection Lens

1. Remove the projection lens block (with shift mechanism) according to the section 6.9. "Removal of Analysis Block".
2. Unscrew the 4 screws and separate the projection lens and the shift mechanism.

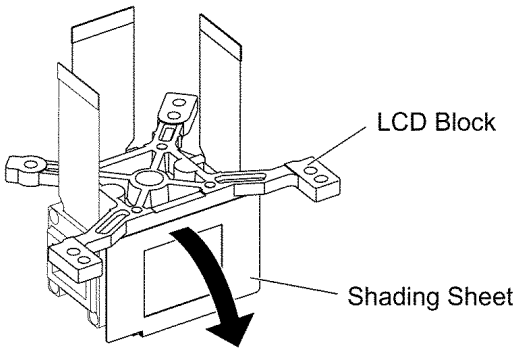


6.12. Replacement of LCD Panel (B)

1. Remove the LCD block according to the section 6.10. "Removal of LCD Block".
2. Remove the shading sheet.

Note:

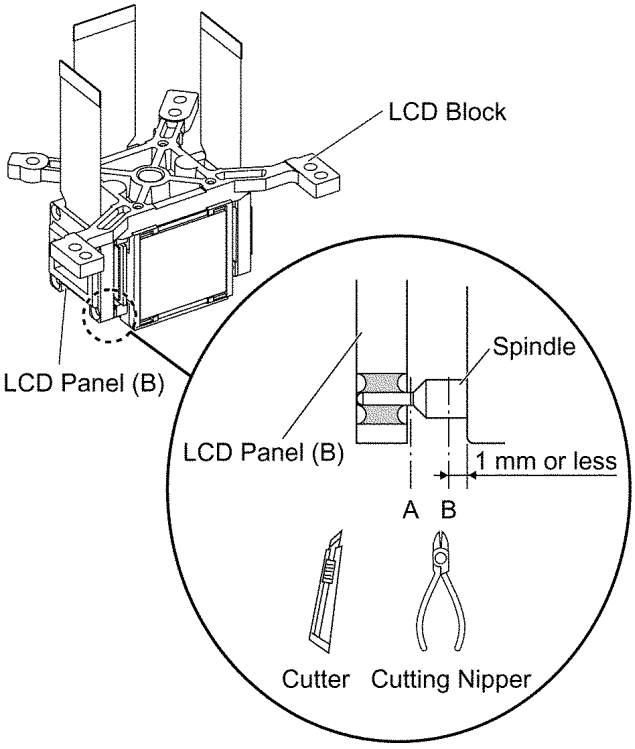
- The shading sheet is adhered with the adhesive sheet. Do not touch the adhesive sheet of the shading sheet because it is adhered on former position after the LCD panel is replaced.



3. Cut the 4 LCD panel installation spindles at the position A and remove the LCD panel (B).
4. Cut the 4 LCD panel installation spindles at the position B and remove them.

Notes:

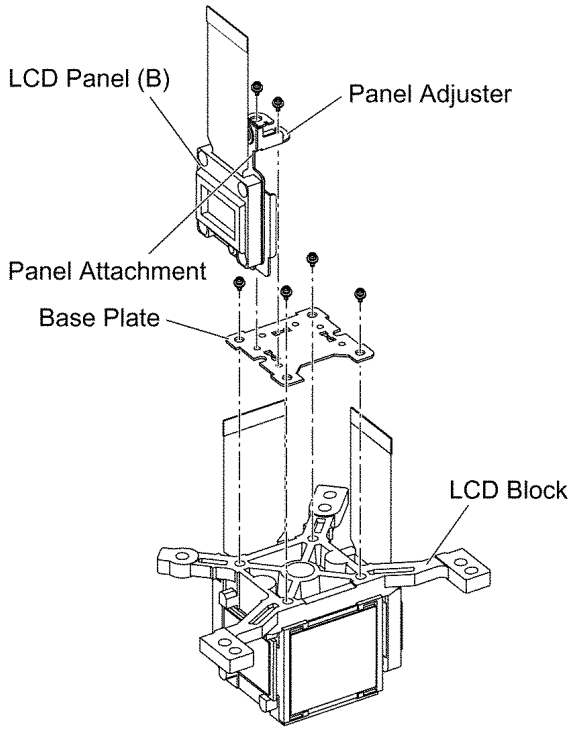
- Work carefully not to apply external force around the spindle part by using a cutter, cutting nipper or the like for cutting the spindle.
- Adjust the height after the spindle is cut to 1 mm or less.



5. Attach the base plate with 4 screws.
6. Tighten the 2 screws temporarily just until new LCD panel (with the panel attachment and panel adjuster) can be shifted by your fingers.

Note:

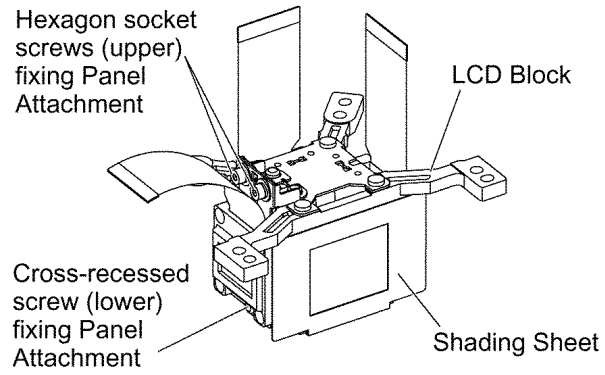
- The panel adjustment fittings set (panel adjuster, panel attachment and base plate) is an option for service.



7. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
8. Adjust the convergence according to the section 7.4. "Convergence Adjustment".
9. After the adjustment, while paying attention not to vary the adjusting result, tighten the 2 screws (upper) fixing the panel attachment temporarily with a hexagon head wrench.

   Notes:

   - Prepare a hexagon head wrench processed short.
10. Remove the LCD block again.
11. Tighten the 3 screws fixing the panel attachment.
12. Adhere the shading sheet as it was.

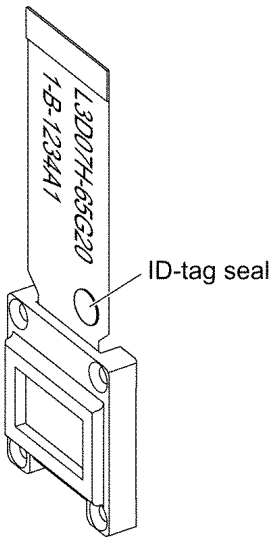


13. Reassemble the projector as it was.

6.13. LCD Panel Discrimination

ID-tag seal color	LCD panel
Red	LCD panel (R)
Blue	LCD panel (B)
(No seal)	LCD panel (G)

- Since the ID-tag seal is pasted to the FPC of LCD Panel, (R), (G) or (B) can be easily identified by the color of the seal.
- Finally, identify the panel color by the part number printed on the FPC.



6.14. LCD Panel Combination

- Part number is printed on the FPC of LCD Panel.
- When replacing LCD Panel, use a component which has the same part number as the original.

LCD panel	Combination1	Combination2
R	L5BDAYY00020 (L3D07H-65G20)	L5BDAYY00023 (L3D07H-66G20)
G	L5BDAYY00024 (L3D07H-66G20)	L5BDAYY00021 (L3D07H-65G20)
B	L5BDAYY00022 (L3D07H-65G20)	L5BDAYY00025 (L3D07H-66G20)

6.15. Replacement of Projection Polarizer

- The procedure is described as an example of projection polarizer (B).

1. Remove the LCD block according to the section 6.10. "Removal of LCD Block".
2. Remove the projection polarizer which requires replacing. (The projection polarizer is secured with adhesive tape.)

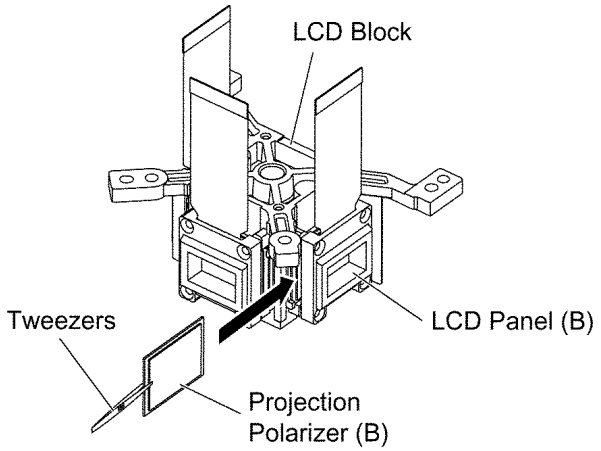
   Notes:

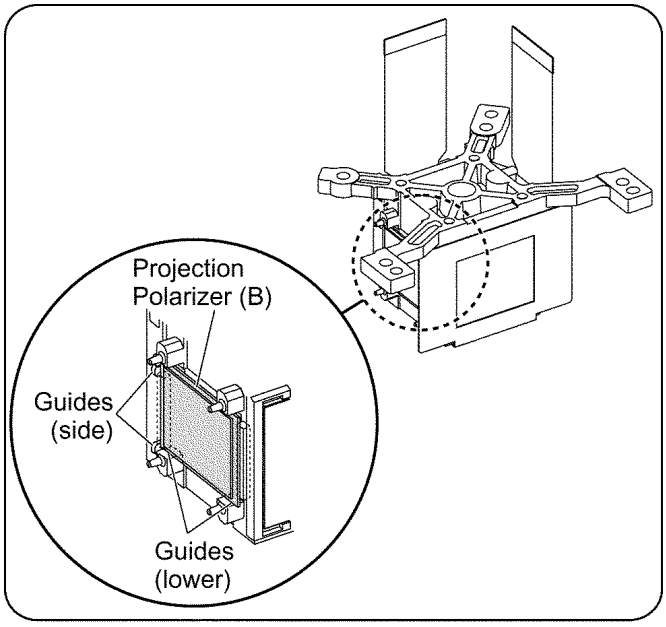
   - Be careful not to damage peripheral components (prism, LCD panel, etc.).
   - Use tweezers.
3. Install new projection polarizer.
   a. Put adhesive tape on the projection polarizer.
   b. Stick the projection polarizer on the specified position.

      Notes:

      - Align the projection polarizer with the guides (lower, side) of LCD block.
      - Be careful not to touch the surface of projection polarizer.
      - Use tweezers.

   c. Press the adhesive part and secure the projection polarizer.





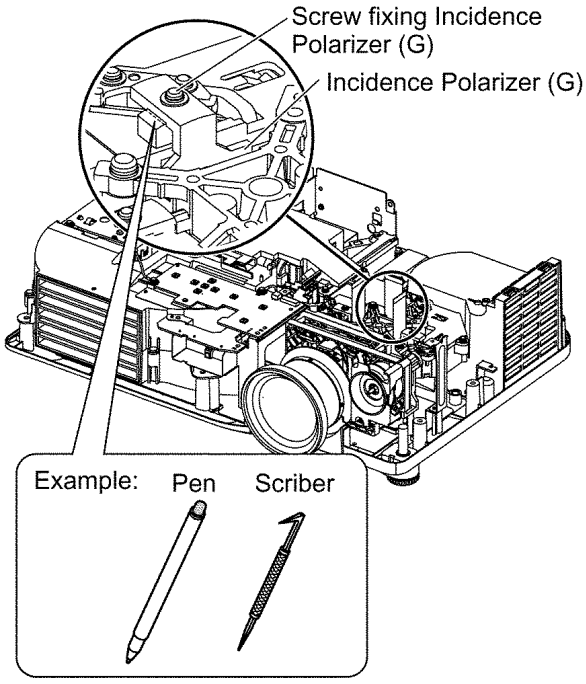
6.16. Replacement of Incidence Polarizer

The procedure is described as an example of incidence polarizer (G).

1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 6.3. "Removal of A-P.C.Board".
2. Mark positions of the incidence polarizer.

   Note:

   - Mark accurately as possible because the marks will be used for resetting the incidence polarizer position.
3. Unscrew the 1 screw and remove the incidence polarizer.
4. Attach a new incidence polarizer and align it with the mark.
5. Tighten the 1 screw with care not to move the incidence polarizer position.

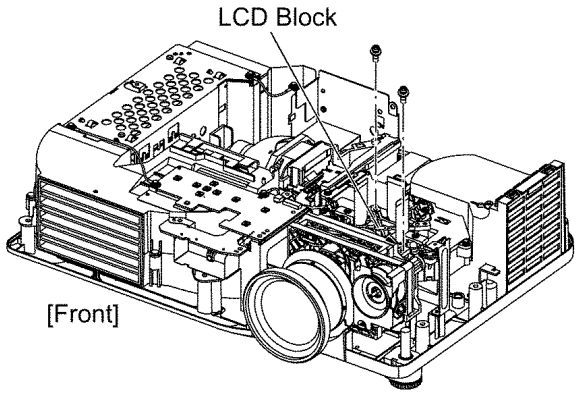


6.17. Replacement of PBS Array (Analysis Block)

1. Remove the A-P.C.Board and lamphouse according to the steps 2 through 5 in the section 6.9. "Removal of Analysis Block ".
2. Unscrew the 2 screws and remove the LCD block.

   Note:

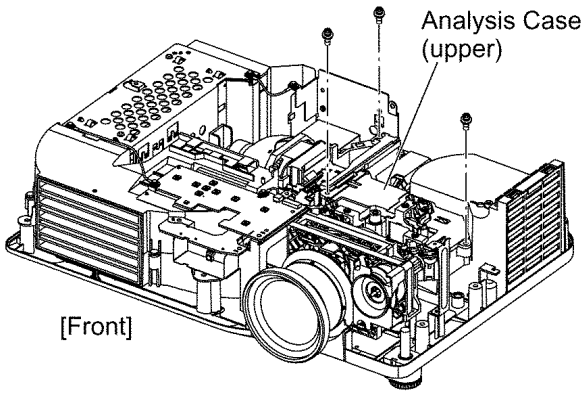
   - Be careful not to touch the surface of prism and LCD panel.



3. Unscrew the 3 screws and remove the analysis case (upper).

   Note:

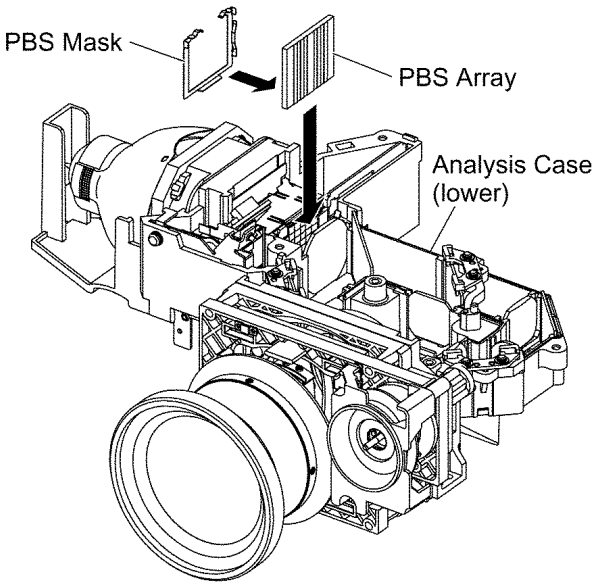
   The incidence polarizer (R, G and B) are installed in the analysis case (upper). Be careful not to shift the installation position nor be damaged.



4. Remove the PBS array (with PBS mask).
5. Remove the PBS mask from the PBS array.
6. Install the PBS mask onto a new PBS array.
7. Install the new PBS array (with PBS mask) in the analysis case (lower).

Note:

- Be careful not to mistake the direction (inside/outside, upper/lower).
- Be careful not to touch the surface of PBS array.



6.18. Removal of Iris Unit

1. Remove the block of Analysis Block, LCD Block and Projection Lens Block according to the steps 1 through 7 in the section 6.9. "Removal of Analysis Block".
2. Unscrew the 2 screws and remove the LCD block.

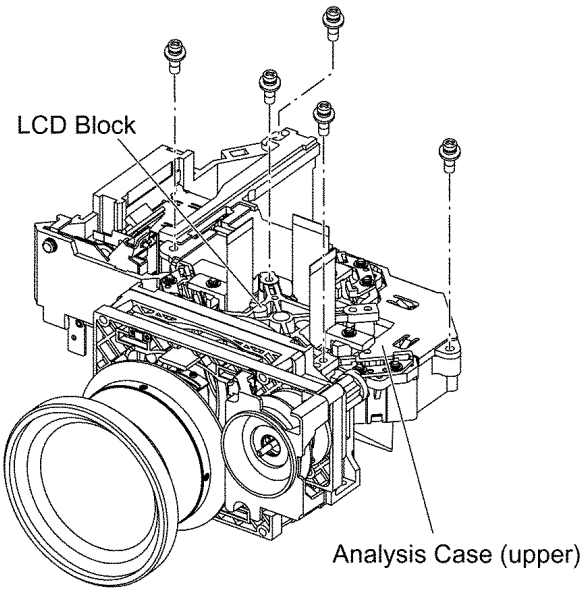
Note:

- Be careful not to touch the surface of prism and LCD panel.

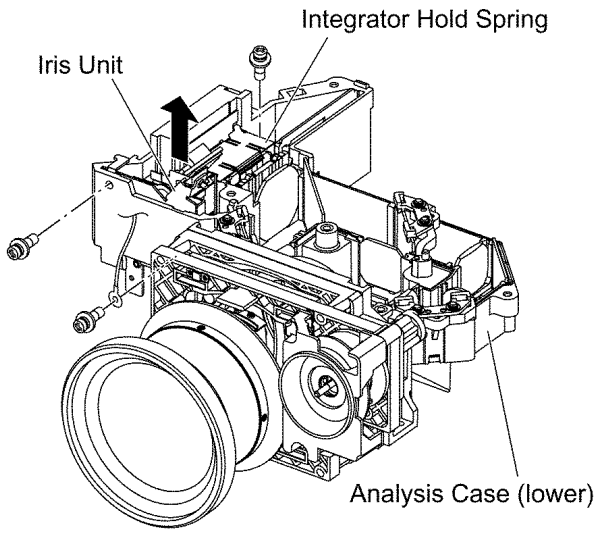
3. Unscrew the 3 screws and remove the analysis case (upper).

Note:

- The incidence polarizer (R, G and B) are installed in the analysis case (upper). Be careful not to shift the installation position nor be damaged.

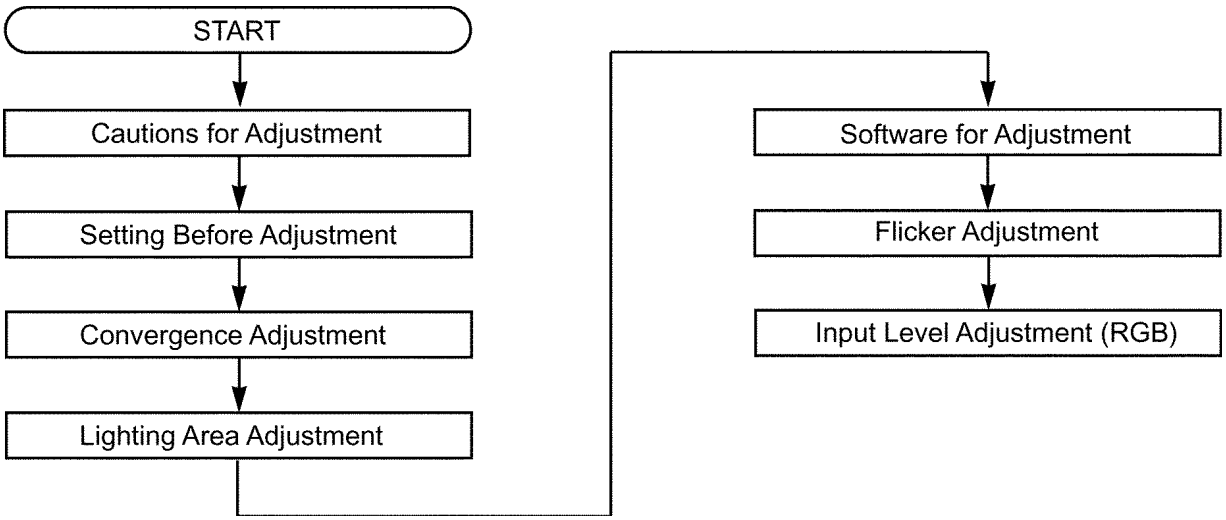


4. Unscrew the 1 screw and remove the integrator hold spring.
5. Unscrew the 2 screws and remove the iris unit .



7 Measurement and Adjustments

7.1. Adjustment Procedure Flowchart

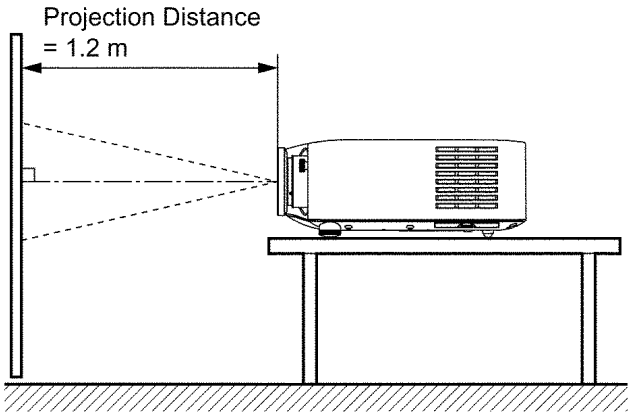


7.2. Cautions for Adjustment

- Never turn off the MAIN POWER switch until every fan completely stops.
- To maintain and ensure safety, always use the designated components for replacement parts.
- If removing any clamps, lead wires or connectors, always place them back in their proper locations.
- Be careful not to damage the lead wires or components when using a soldering iron or similar tool.

7.3. Setting Before Adjustment

- Set up the projector to obtain the projection distance below.
- Turn the zoom ring of the projector to obtain the largest size of the picture.



7.4. Convergence Adjustment

Execute this adjustment when replacing the LCD panel (B) .

7.4.1. Tools to be used

Service Kit : This kit is composed of 3 extension flexible cables and 4 connector extension cables.

Note:

- Consult your dealer or Authorized Service Center for the service kit.

7.4.2. Preparation

1. Loosen 2 screws fixing the panel adjuster and 3 screws fixing the panel attachment, then tighten the 5 screws temporarily just until the LCD panel can be shifted by your fingers.

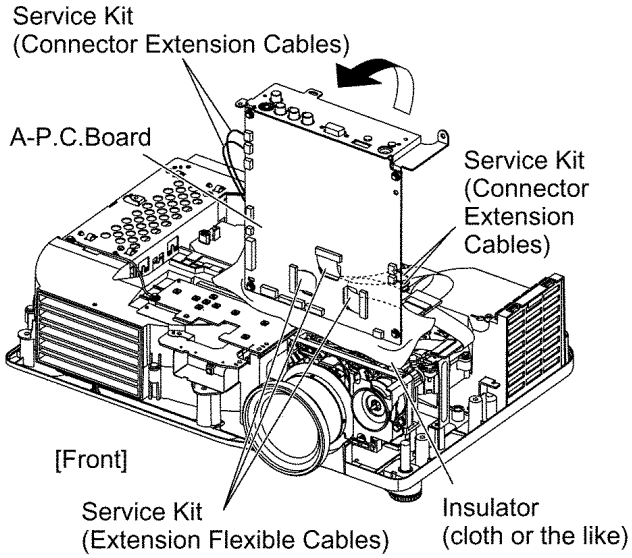
Note:

・See figures in the section 6.12. "Replacement of LCD Panel (B)" for 2 screws fixing the panel adjuster and 3 screws fixing the panel attachment.

2. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
3. Connect the service kit (extension cables).
   - ・Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
   - ・Thermosensor (Intake air) connector - Connector (A7) on A-P.C.Board
   - ・Intake fan connector - Connector (A15) on A-P.C.Board
   - ・Power fan connector - Connector (A16) on A-P.C.Board
   - ・Lamp fan connector - Connector (A18) on A-P.C.Board
4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

Note:

・Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.

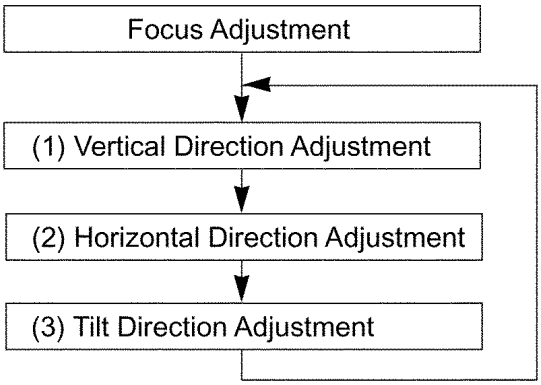


7.4.3. Adjustment Procedure

Prepare 2 pieces of thick black paper (23 mm × 100 mm) that can be shaded.

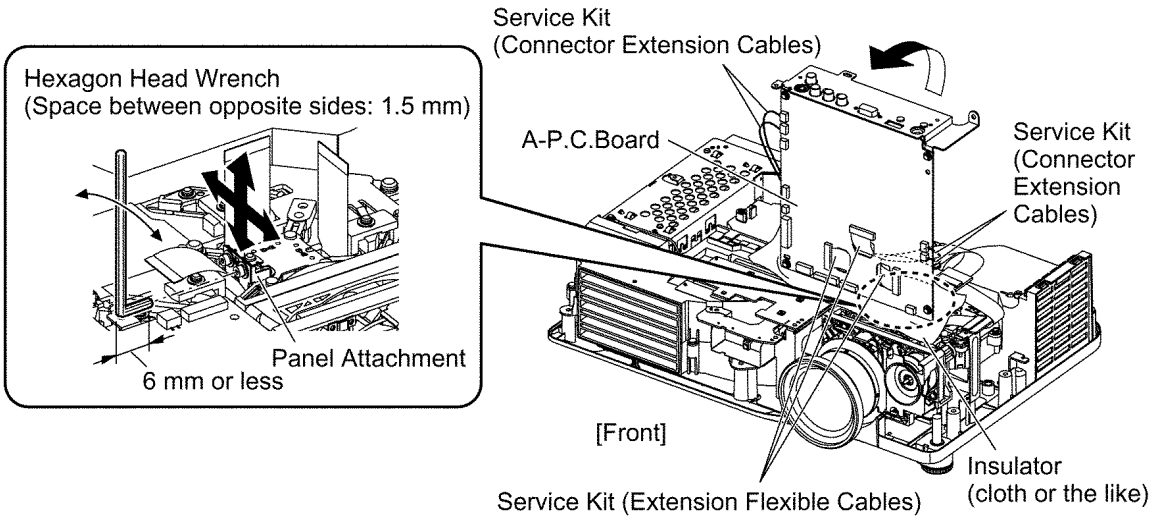
・Cover and shade LCD panels with the paper except the panel that attempts to be adjusted.

1. Display the green crosshatch pattern and adjust the lens focus.
2. Display green and blue crosshatch patterns.
3. Adjust focus by shifting the panel adjuster for LCD panel (B) back and forth, then tighten the 2 screws.
4. Adjust the LCD panel (B) position so that the vertical center of blue crosshatch pattern is overlapped with the vertical center of green crosshatch pattern.
5. Adjust the LCD panel (B) position so that the horizontal center of blue crosshatch pattern is overlapped with the horizontal center of green crosshatch pattern.
6. Correct the tilt of the blue crosshatch pattern by adjusting the LCD panel (B) position.
7. Display green, red and blue crosshatch patterns and confirm the convergence. If it is necessary, fine adjust the convergence so that the blue crosshatch pattern is overlapped with green one.



Repeat steps (1) to (3) until the green and blue crosshatch patterns merge into a cyan pattern.

8. After the adjustment, reassemble the projector according to the steps 9 through 13 in the section 6.12. "Replacement of LCD Panel (B)".



7.5. Lighting Area Adjustment

7.5.1. Tools to be used

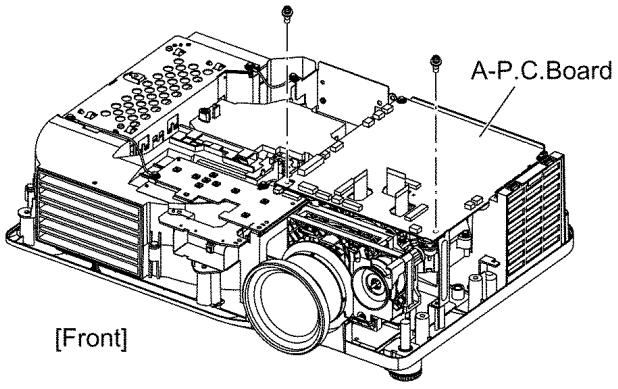
Service Kit: This kit is composed of 3 extension flexible cables and 4 connector extension cables.

Note:

・Consult your dealer or Authorized Service Center for the service kit.

7.5.2. Preparation

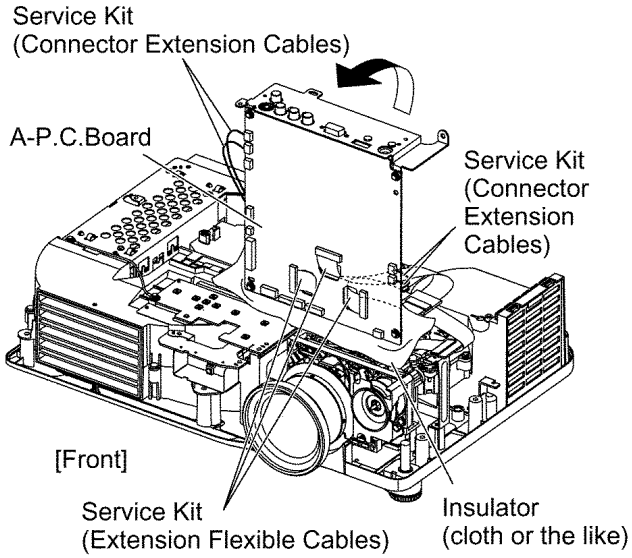
1. Remove the upper case and the connector cover according to the steps 1 through 2 in the section 6.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws.



3. Connect the service kit (extension cables).
   - Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
   - Thermosensor (Intake air) connector - Connector (A7) on A-P.C.Board
   - Intake fan connector - Connector (A15) on A-P.C.Board
   - Power fan connector - Connector (A16) on A-P.C.Board
   - Lamp fan connector - Connector (A18) on A-P.C.Board
4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

Note:

- Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



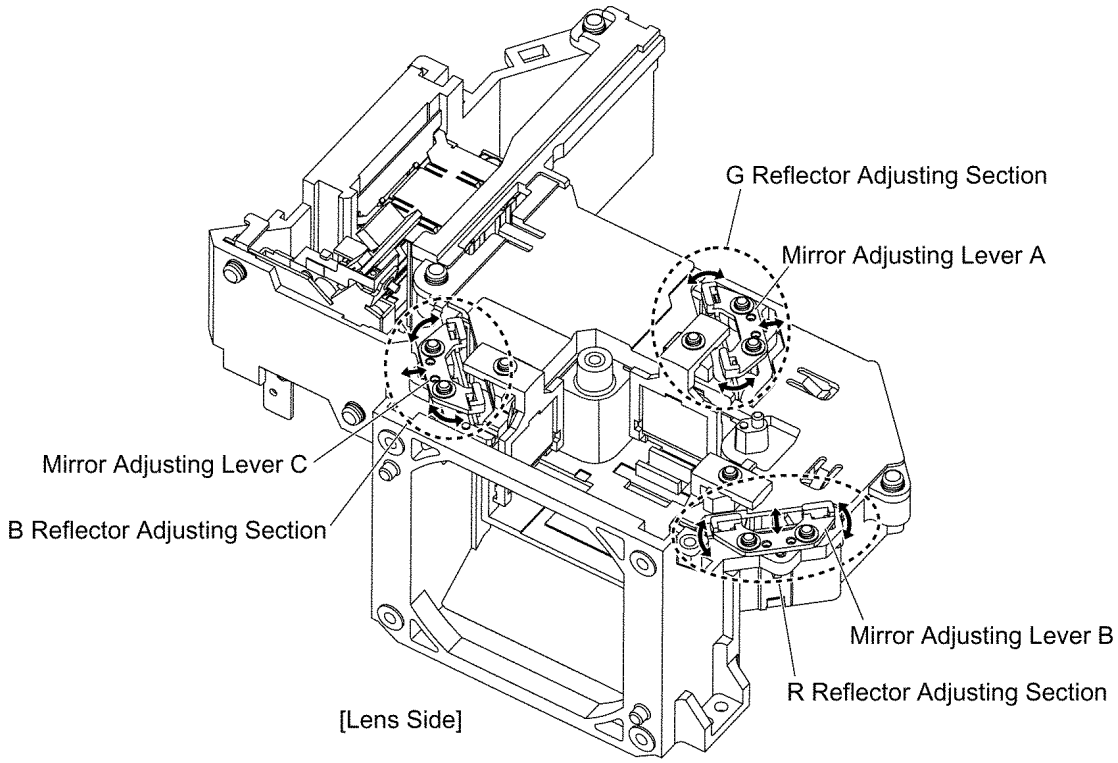
7.5.3. Adjustment Procedure

7.5.3.1. Outline

When the lighting area is off from the adjustment and color unevenness appears, adjust the lighting area into correct position.

Symptom	Measure
Magenta unevenness	G Reflector Adjustment
Cyan unevenness	R Reflector Adjustment
Yellow unevenness	B Reflector Adjustment

- Shifting the mirror adjusting lever horizontally, adjust color unevenness on the screen upper/lower sides.
- Twisting the mirror adjusting lever, adjust color unevenness on the screen right/left sides.



[Above figure is shown only the analysis block for explanation.]

7.5.3.2. G Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever A just until the lever can be shifted.
3. Adjust the mirror adjusting lever A position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

7.5.3.3. R Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever B just until the lever can be shifted.
3. Adjust the mirror adjusting lever B position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

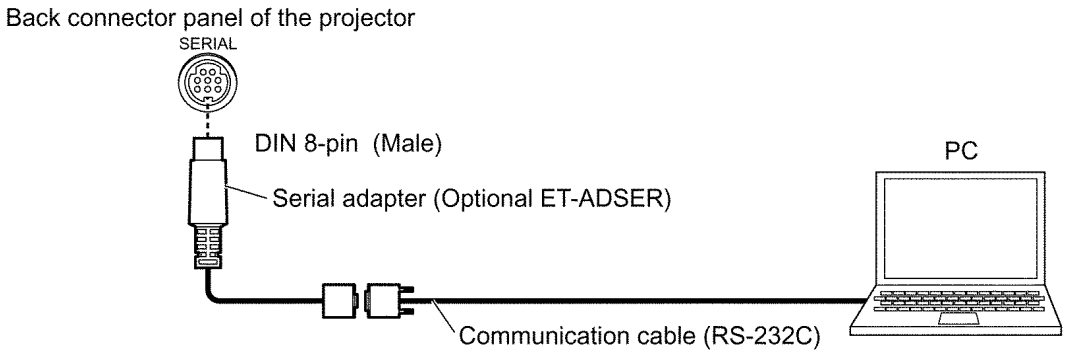
7.5.3.4. B Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever C just until the lever can be shifted.
3. Adjust the mirror adjusting lever C position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

7.6. Software for Adjustment

7.6.1. Outline

- This projector needs computer-aided adjustments.
- After the software adjustments, this projector must be turned off and on again to memorize the settings.
- Connect the cable between the projector and a PC as shown below.
- Updating the software will change the version number.



7.6.2. Operating Procedure

1. Run software program by the keyboard entry.

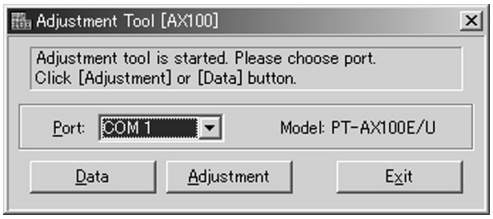
   Note:

   ・Use the software program as below.

   Adjustment Tool [AX100]

2. The first menu is Port selection menu.
3. Adjust the projector by selecting the necessary item from the menu in each stage.

7.6.3. Port Selection Menu



Select the port name of PC which connects with the projector, then click [Data] or [Adjustment] button.

7.6.3.1. Explanation of Buttons

Data:

Displays the data transmission/reception menu.

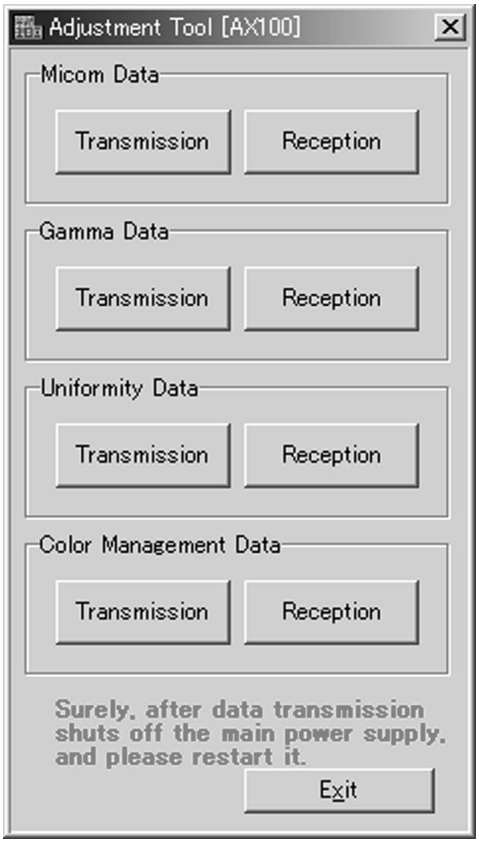
Adjustment:

Displays the adjustment menu.

Exit:

Exits this application.

7.6.4. Data Transmission/Reception Menu



7.6.4.1. Explanation of Buttons

Micom Data Transmission:

Reads the microcomputer data from the file and transmits it to the projector.

Micom Data Reception:

Receives the microcomputer data from the projector and writes it in the file.

Gamma Data Transmission:

Reads the gamma data from the file and transmits it to the projector.

Gamma Data Reception:

Receives the gamma data from the projector and writes it in the file.

Uniformity Data Transmission:

Reads the color unevenness correction data from the file and transmits it to the projector.

Uniformity Data Reception:

Receives the color unevenness correction data from the projector and writes it in the file.

Color Management Data Transmission:

Reads the color management data from the file and transmits it to the projector.

Color Management Data Reception:

Receives the color management data from the projector and writes it in the file.

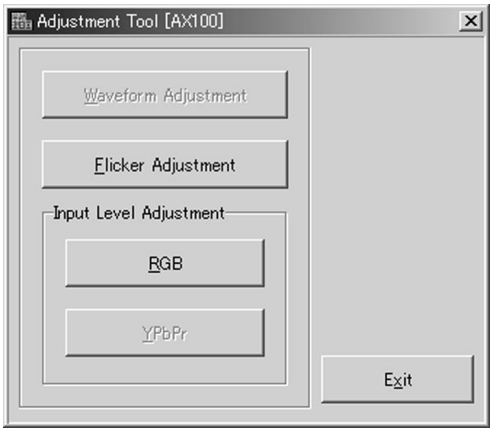
Exit:

Exits this application.

7.6.4.2. Receiving and transmitting of the data

Click a target button and specify a file name.

7.6.5. Adjustment Menu



7.6.5.1. Explanation of Buttons

Flicker Adjustment:

Displays Flicker Adjustment menu.

Input Level Adjustment [RGB]:

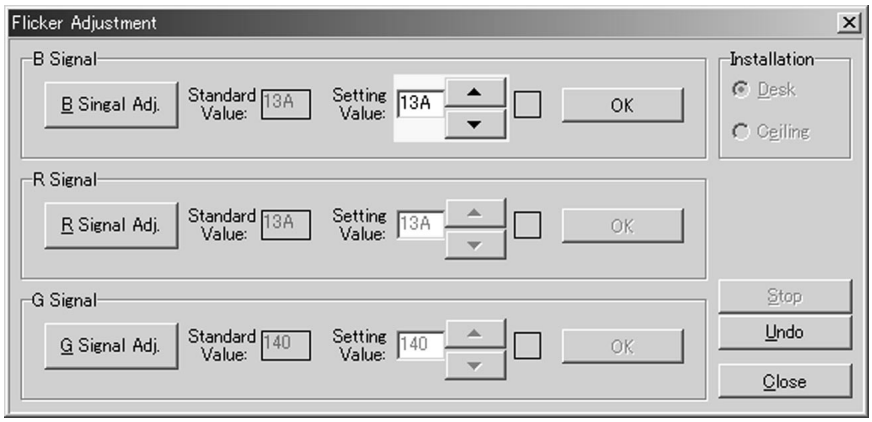
Displays Input Level Adjustment (RGB) menu.

Exit:

Exits this application.

7.7. Flicker Adjustment

7.7.1. Adjustment Menu



7.7.2. Explanation of Buttons

B Signal Adj.:

Sets the test signal mode to the B-signal and allows the " ▲ ", " ▼ " and "OK" buttons of the B-signal to becomes active.

R Signal Adj.:

Sets the test signal mode to the R-signal and allows the " ▲ ", " ▼ " and "OK" buttons of the R-signal to becomes active.

G Signal Adj.:

Sets the test signal mode to the G-signal and allows the " ▲ ", " ▼ " and "OK" buttons of the G-signal to becomes active.

▲ or ▼

Changes the setting value and transmits its data. (The 8 and 2 keys on the keyboard have the same functions.) If releasing the mouse or key after pressing it continuously, the data is transmitted once. The variable setting value is enclosed in a box and using the TAB or SPACE key allows the move of the box.

OK:

Determines the setting value and stores its data in the EEPROM. (The ENTER key on the keyboard has the same function.) The item having two or more kinds of setting values is processed two or more items. Clicking this button or pressing ENTER key changes the color of the text "OK" to cyan (light blue). If changing the setting value using the " ▲ " or " ▼ " button or the 8 or 2 key, its color returns to black.

Stop:

Discontinues the communication. (This button is usually set for its inactive mode.)

Undo:

Returns the setting value to its original state and transmits its data. The color of the text "OK" returns to black.

Close:

Closes this menu.

7.7.3. Equipment to be used

PC, Software for Adjustment

7.7.4. Adjustment Procedure

1. Display Flicker Adjustment menu.
2. Click "B Signal Adj," and the blue flicker adjustment pattern will be displayed.
3. Minimize the flicker while observing the projected pattern.
4. Click "R Signal Adj," and the red flicker adjustment pattern will be displayed.
5. Minimize the flicker while observing the projected pattern.
6. Click "G Signal Adj," and the green flicker adjustment pattern will be displayed.
7. Minimize the flicker while observing the projected pattern.

7.8. Input Level Adjustment (RGB)

7.8.1. Adjustment Menu

7.8.2. Explanation of Buttons

OK:

Executes automatic sub contrast and sub brightness adjustments, then closes this dialog.

Cancel:

Cancels this menu.

7.8.3. Equipment to be used

PC, RGB Signal Generator, Software for Adjustment

7.8.4. Adjustment Procedure

1. Display the input level adjustment [RGB] menu.
2. Input a window pattern signal to PC IN (RGB) connector.

   Note:

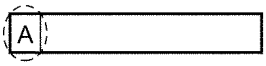
   - Use approx. 15 % window pattern as follows.

     Black background (screen width) : White window width = 2 : 1

     Black background (screen height) : White window height = 3 : 1
   - Use the window pattern of XGA (1 024 × 768).
3. Click the OK button.

8 Troubleshooting

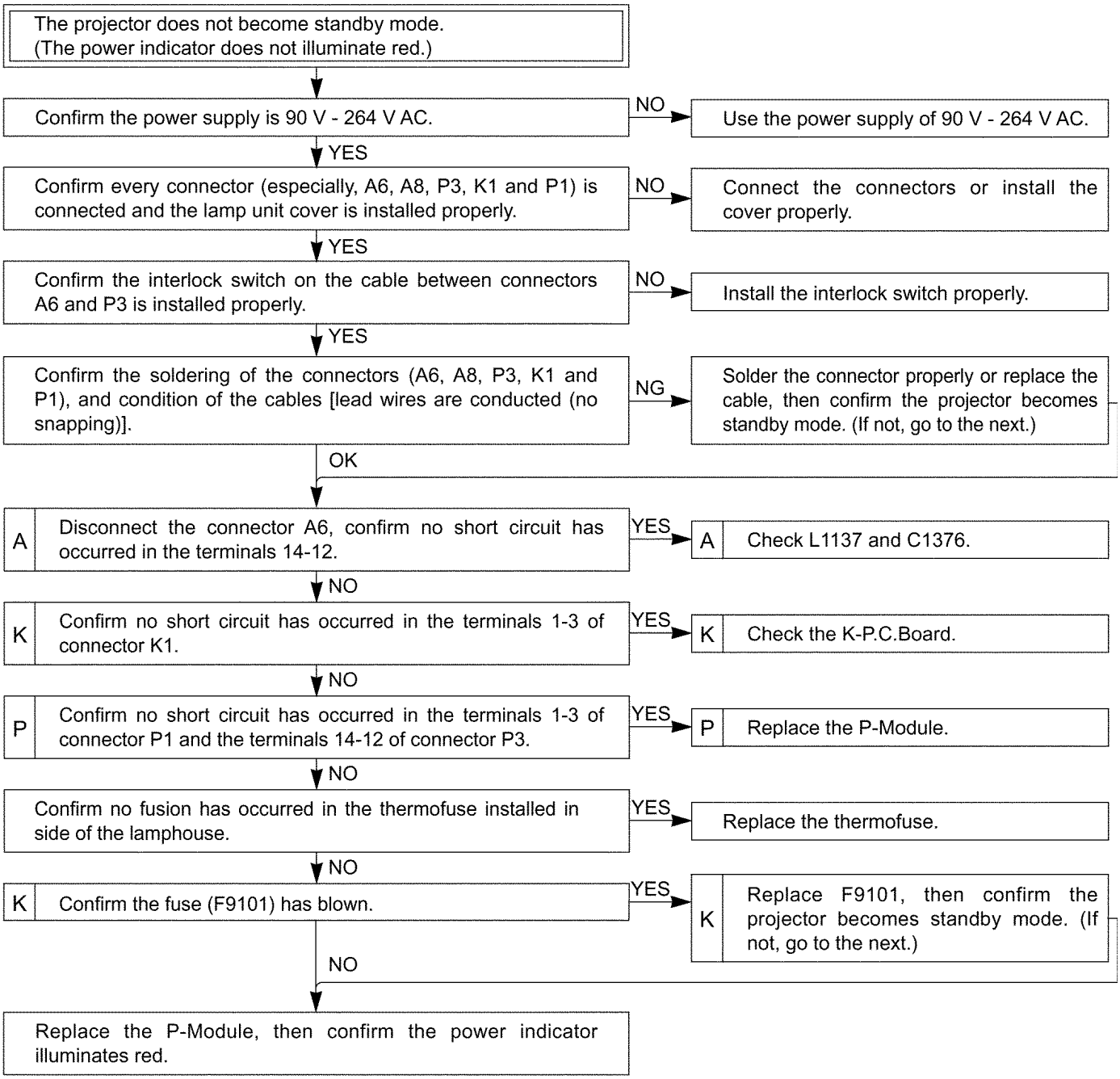
The letters in the left of the inspection items indicate the P.C.Boards or Modules related to their respective descriptions.

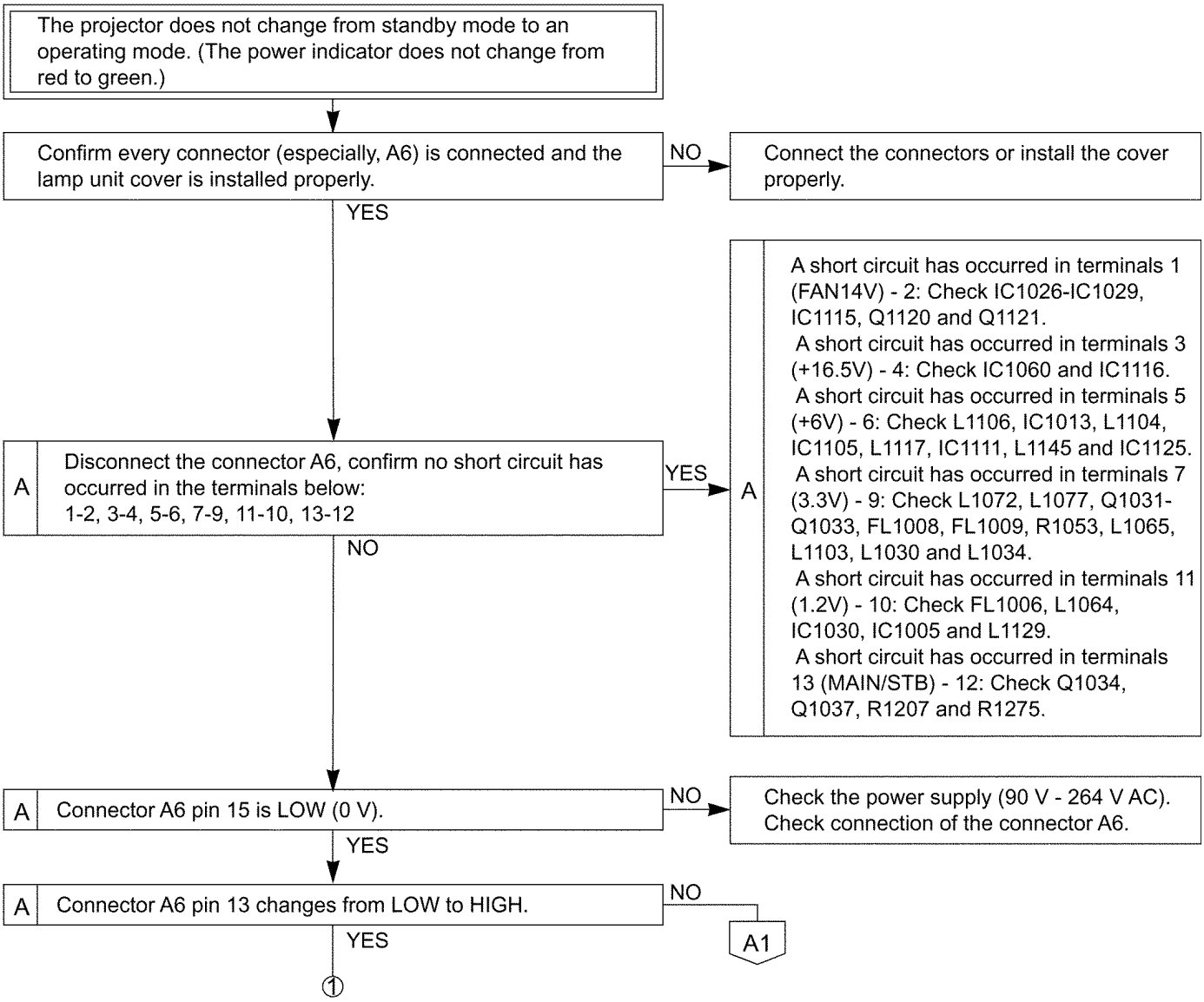
Note: 

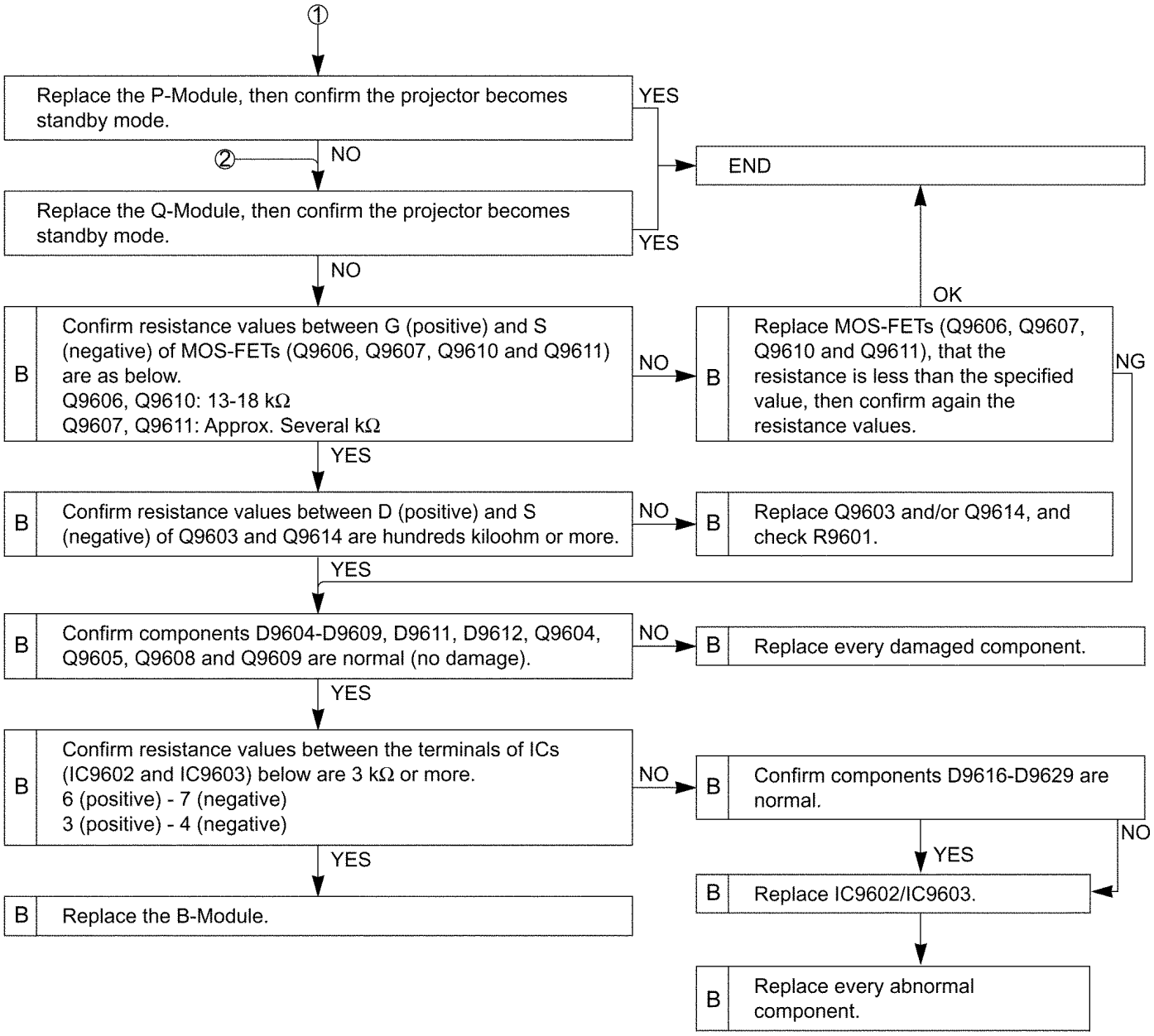
The letter of the alphabet indicates the P.C.Board or Module name.

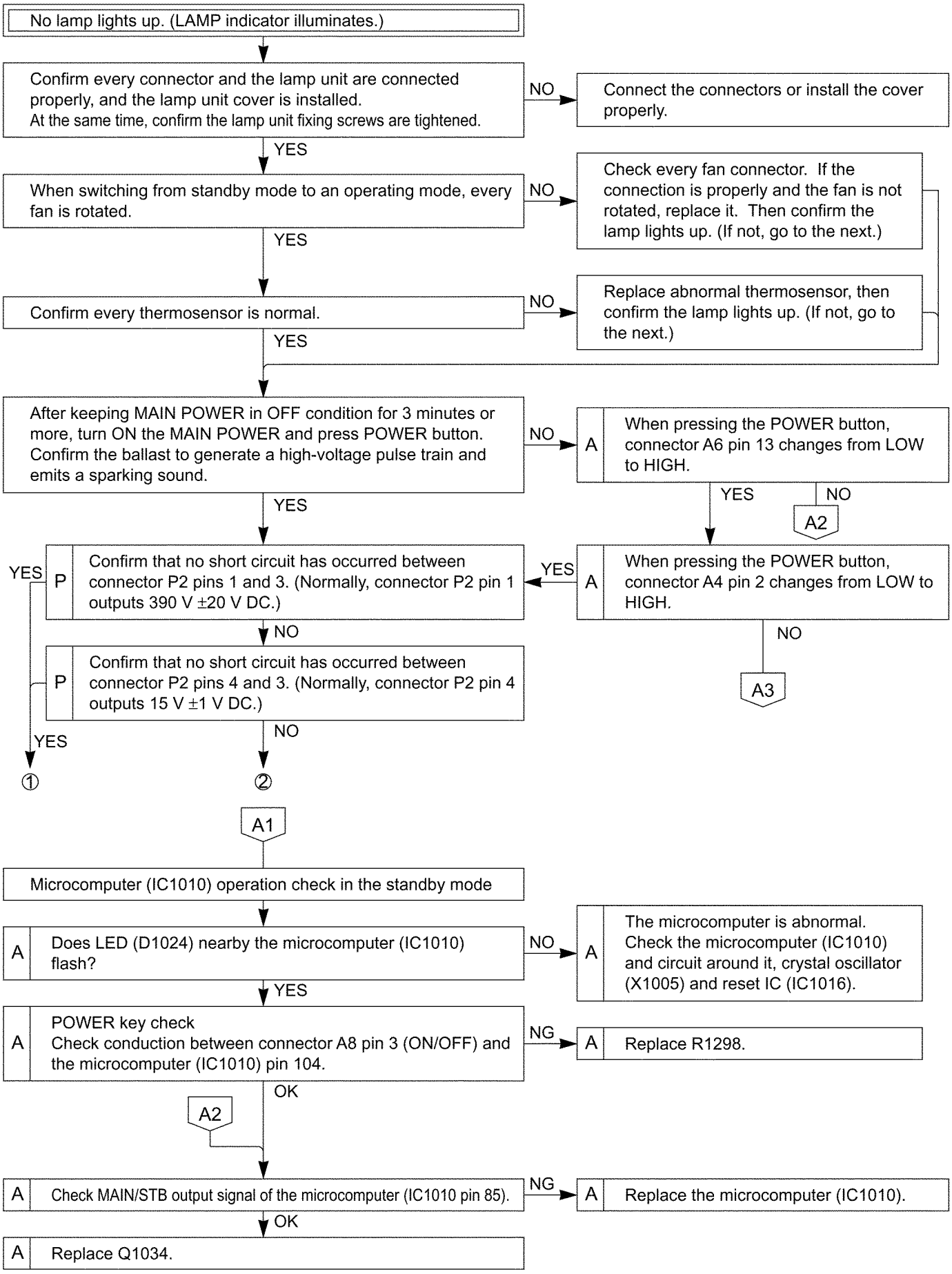
(Example) A: A-P.C.Board, P: P-Module

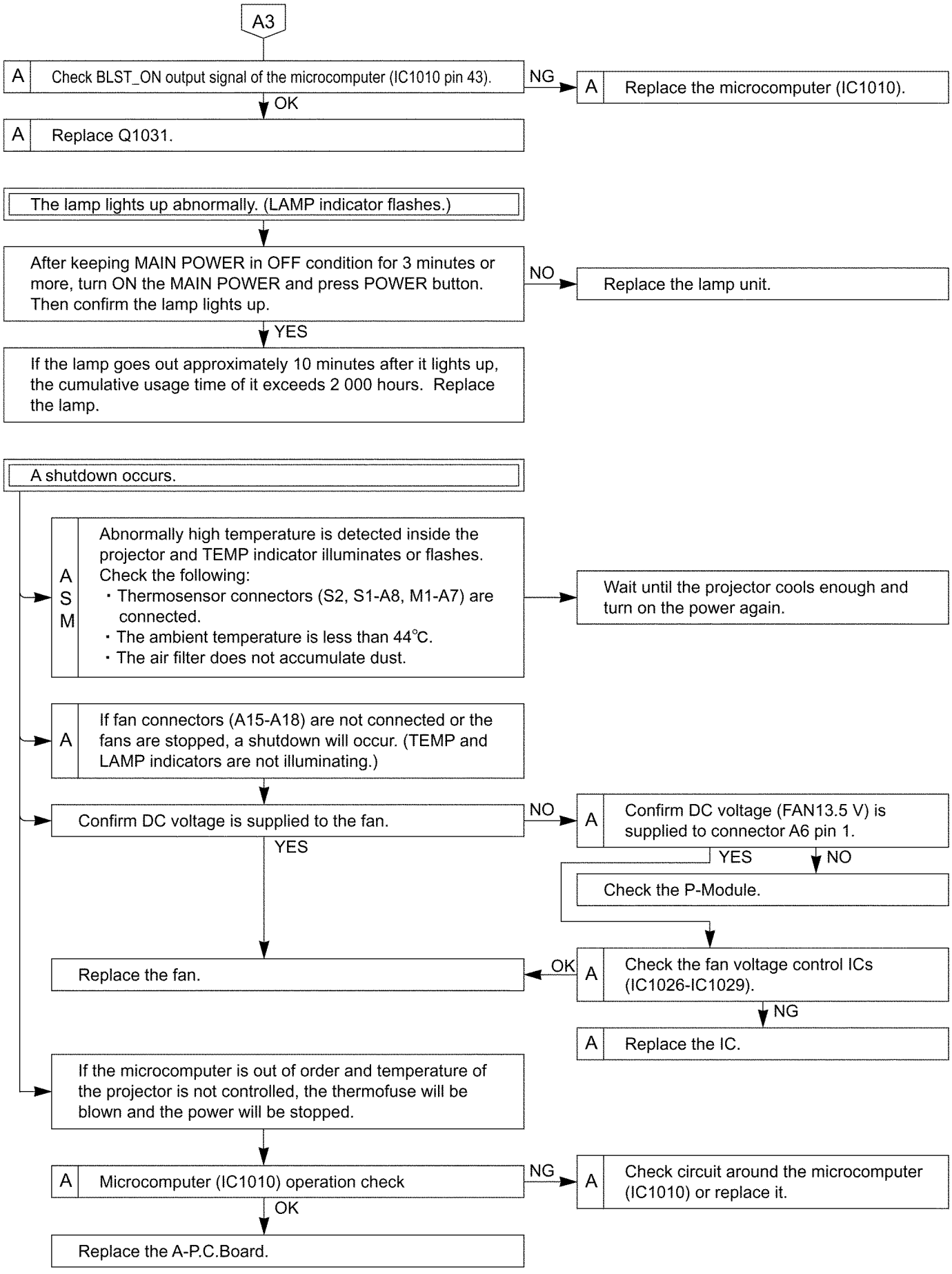
- If replacing A-P.C.Board (assembly), read the ROM data from the old P.C.Board and write it in the new one according to the section 7.6. "Software for Adjustment". At this time, if the readout from the old P.C.Board does not succeed, remove IC1061 and IC1063 from the old P.C.Board and install them on the new one. Then, execute the self-check according to the chapter 3. "Self-Check Mode", and confirm "G SAVED" and "U-SAVED" display "OK".
- If replacing A-P.C.Board (assembly), minimize the flicker according to the chapter 4. "Flicker Adjustment Mode".
- If replacing A-P.C.Board (assembly), adjust the RGB Input Level according to the chapter 7.8. "Input Level Adjustment".

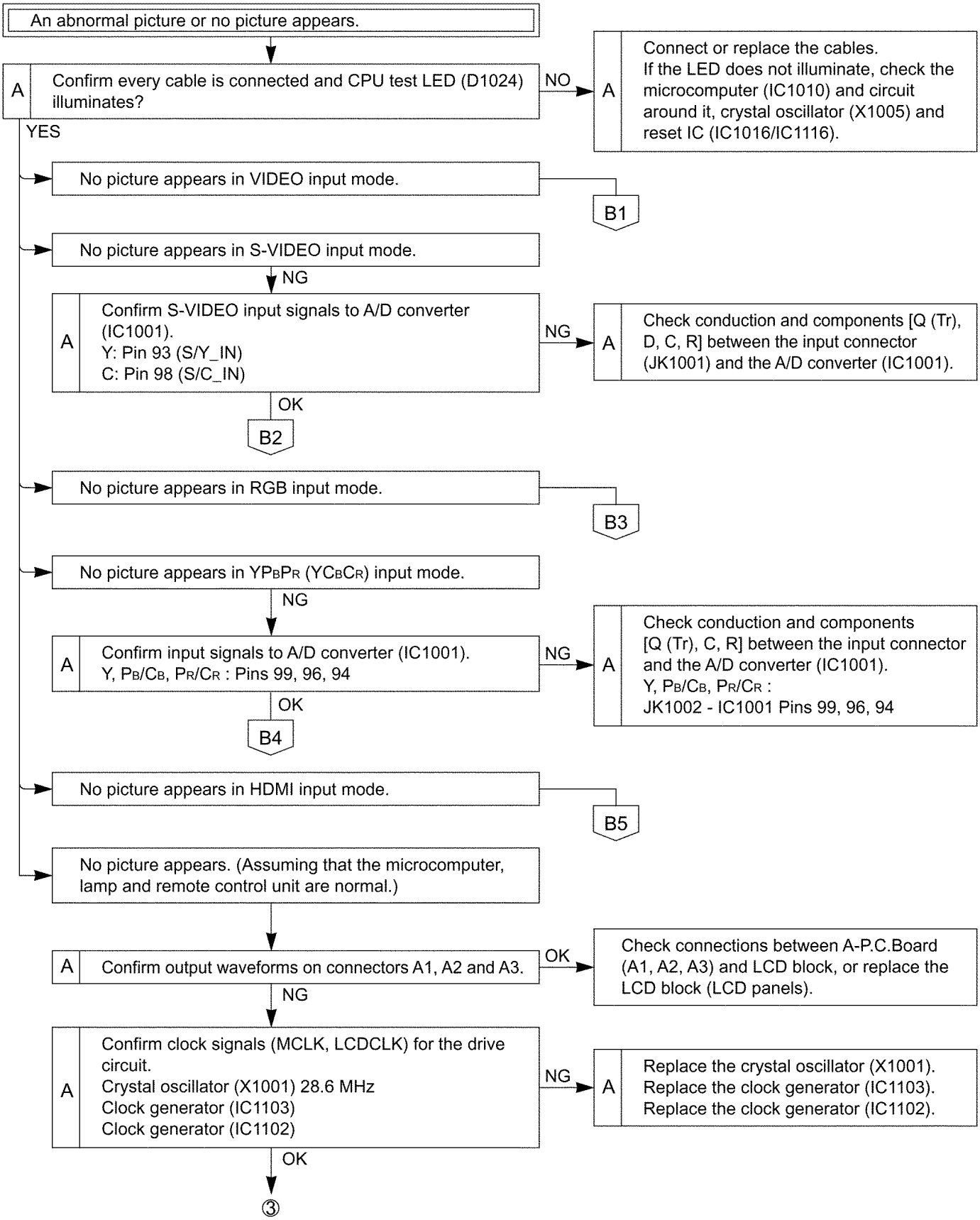

The projector does not become standby mode.
(The power indicator does not illuminate red.)
Confirm the power supply is 90 V - 264 V AC.
NO
Use the power supply of 90 V - 264 V AC.
YES
Confirm every connector (especially, A6, A8, P3, K1 and P1) is connected and the lamp unit cover is installed properly.
NO
Connect the connectors or install the cover properly.
YES
Confirm the interlock switch on the cable between connectors A6 and P3 is installed properly.
NO
Install the interlock switch properly.
YES
Confirm the soldering of the connectors (A6, A8, P3, K1 and P1), and condition of the cables [lead wires are conducted (no snapping)].
NG
Solder the connector properly or replace the cable, then confirm the projector becomes standby mode. (If not, go to the next.)
OK
A
Disconnect the connector A6, confirm no short circuit has occurred in the terminals 14-12.
YES
A
Check L1137 and C1376.
NO
K
Confirm no short circuit has occurred in the terminals 1-3 of connector K1.
YES
K
Check the K-P.C.Board.
NO
P
Confirm no short circuit has occurred in the terminals 1-3 of connector P1 and the terminals 14-12 of connector P3.
YES
P
Replace the P-Module.
NO
Confirm no fusion has occurred in the thermofuse installed in side of the lamphouse.
YES
Replace the thermofuse.
NO
K
Confirm the fuse (F9101) has blown.
YES
K
Replace F9101, then confirm the projector becomes standby mode. (If not, go to the next.)
NO
Replace the P-Module, then confirm the power indicator illuminates red.

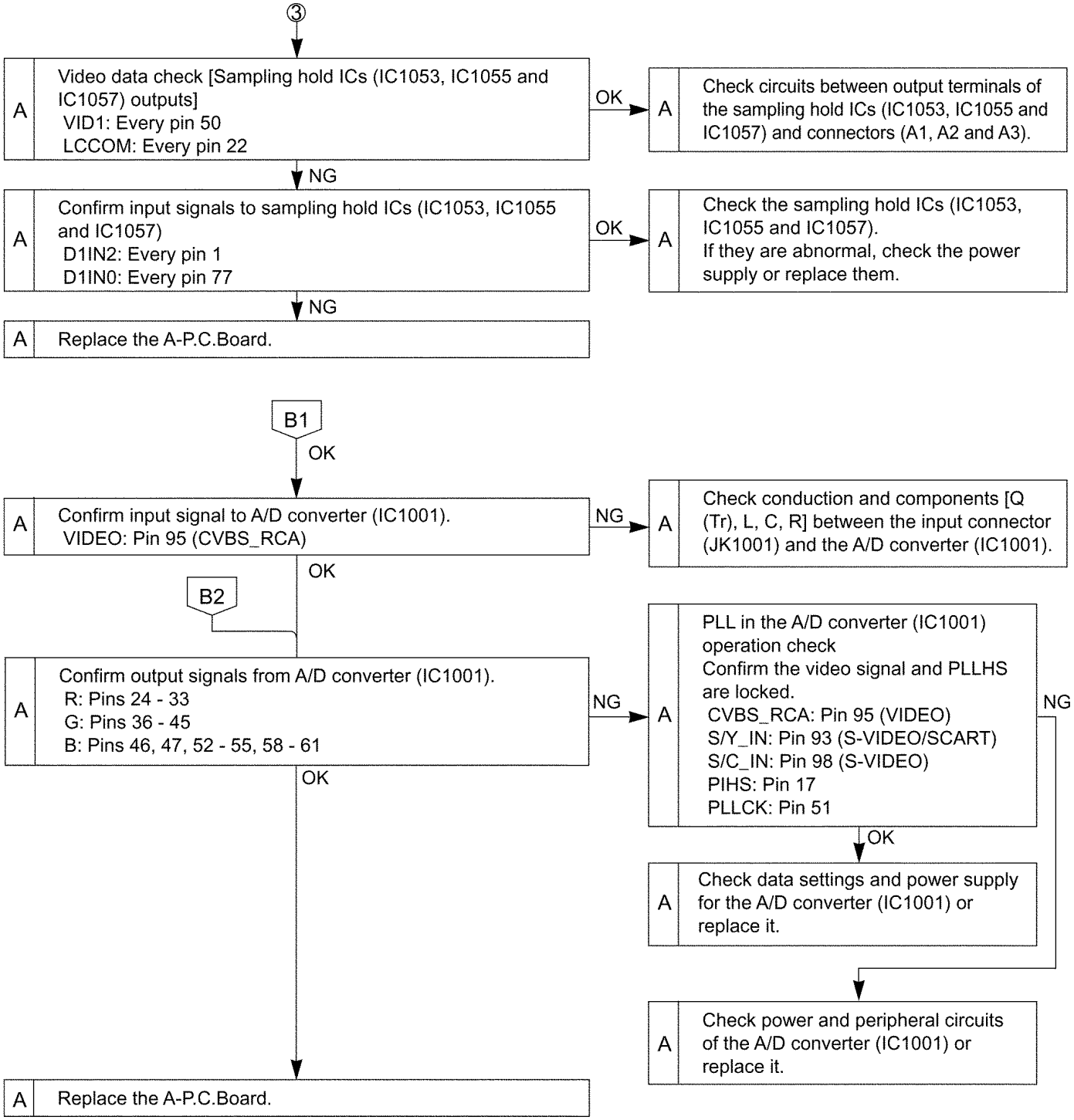

The projector does not change from standby mode to an operating mode. (The power indicator does not change from red to green.)
Confirm every connector (especially, A6) is connected and the lamp unit cover is installed properly.
NO
Connect the connectors or install the cover properly.
YES
A
Disconnect the connector A6, confirm no short circuit has occurred in the terminals below:
1-2, 3-4, 5-6, 7-9, 11-10, 13-12
YES
A
A short circuit has occurred in terminals 1 (FAN14V) - 2: Check IC1026-IC1029, IC1115, Q1120 and Q1121.
A short circuit has occurred in terminals 3 (+16.5V) - 4: Check IC1060 and IC1116.
A short circuit has occurred in terminals 5 (+6V) - 6: Check L1106, IC1013, L1104, IC1105, L1117, IC1111, L1145 and IC1125.
A short circuit has occurred in terminals 7 (3.3V) - 9: Check L1072, L1077, Q1031-Q1033, FL1008, FL1009, R1053, L1065, L1103, L1030 and L1034.
A short circuit has occurred in terminals 11 (1.2V) - 10: Check FL1006, L1064, IC1030, IC1005 and L1129.
A short circuit has occurred in terminals 13 (MAIN/STB) - 12: Check Q1034, Q1037, R1207 and R1275.
NO
A
Connector A6 pin 15 is LOW (0 V).
NO
Check the power supply (90 V - 264 V AC).
Check connection of the connector A6.
YES
A
Connector A6 pin 13 changes from LOW to HIGH.
NO
A1
YES
①

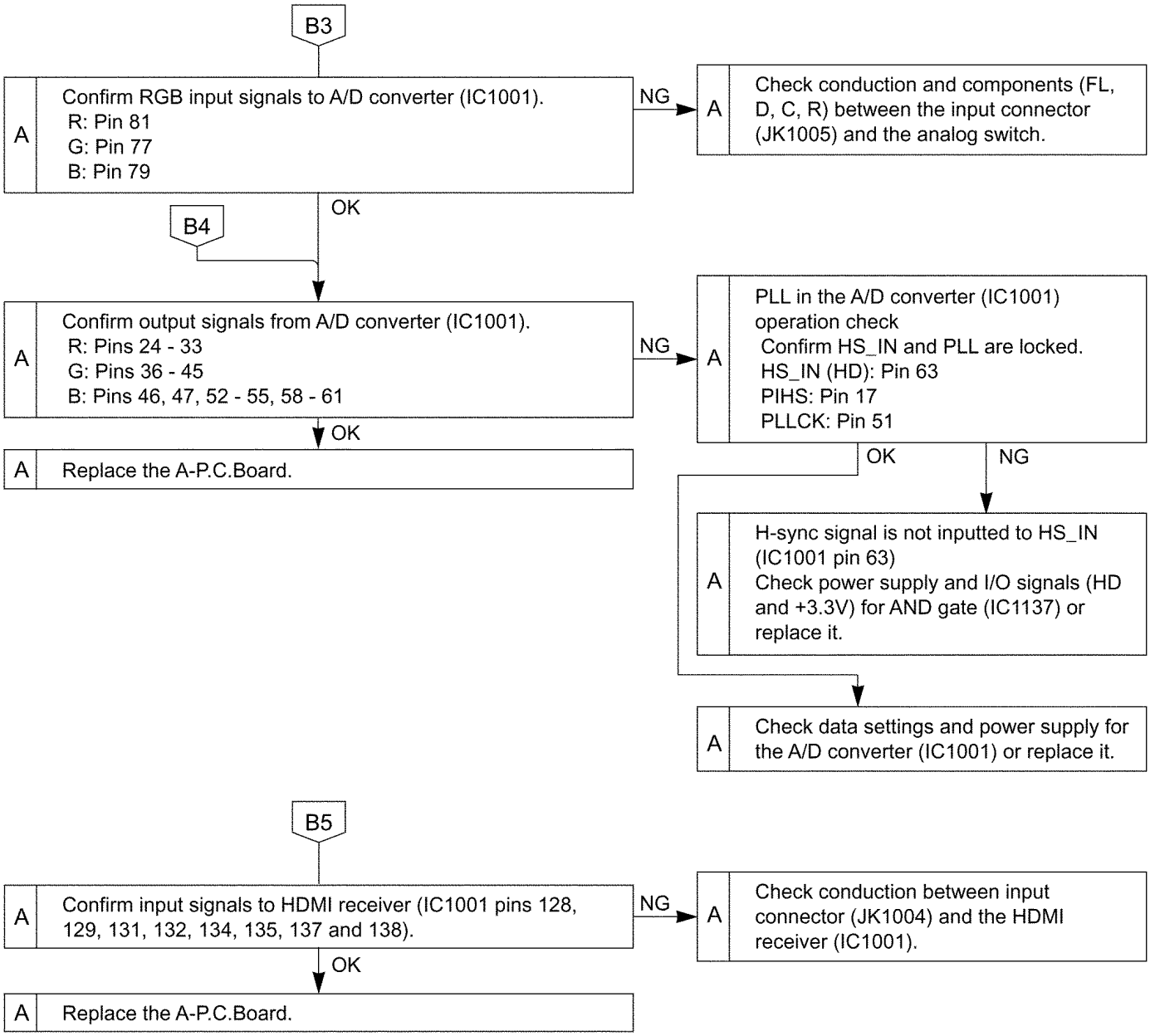

①
Replace the P-Module, then confirm the projector becomes standby mode.
YES
END
②
NO
Replace the Q-Module, then confirm the projector becomes standby mode.
YES
NO
OK
B
Confirm resistance values between G (positive) and S (negative) of MOS-FETs (Q9606, Q9607, Q9610 and Q9611) are as below.
Q9606, Q9610: 13-18 kΩ
Q9607, Q9611: Approx. Several kΩ
NO
B
Replace MOS-FETs (Q9606, Q9607, Q9610 and Q9611), that the resistance is less than the specified value, then confirm again the resistance values.
NG
YES
B
Confirm resistance values between D (positive) and S (negative) of Q9603 and Q9614 are hundreds kiloohm or more.
NO
B
Replace Q9603 and/or Q9614, and check R9601.
YES
B
Confirm components D9604-D9609, D9611, D9612, Q9604, Q9605, Q9608 and Q9609 are normal (no damage).
NO
B
Replace every damaged component.
YES
B
Confirm resistance values between the terminals of ICs (IC9602 and IC9603) below are 3 kΩ or more.
6 (positive) - 7 (negative)
3 (positive) - 4 (negative)
NO
B
Confirm components D9616-D9629 are normal.
NO
YES
YES
B
Replace IC9602/IC9603.
B
Replace the B-Module.
B
Replace every abnormal component.

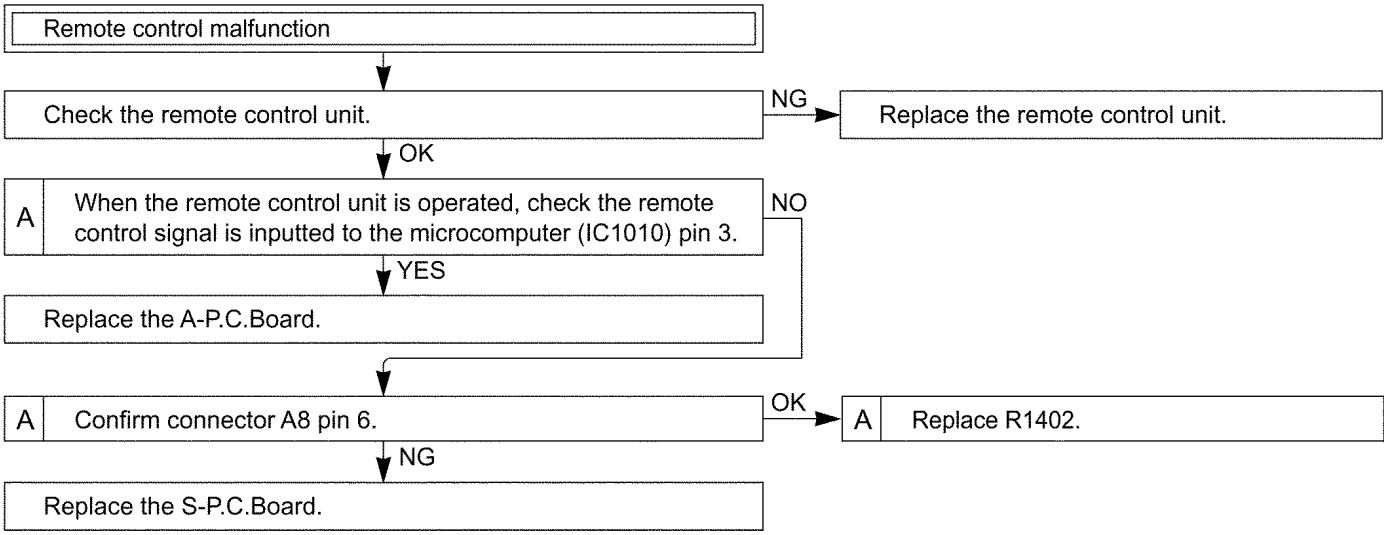

No lamp lights up. (LAMP indicator illuminates.)
Confirm every connector and the lamp unit are connected properly, and the lamp unit cover is installed.
At the same time, confirm the lamp unit fixing screws are tightened.
NO
Connect the connectors or install the cover properly.
YES
When switching from standby mode to an operating mode, every fan is rotated.
NO
Check every fan connector. If the connection is properly and the fan is not rotated, replace it. Then confirm the lamp lights up. (If not, go to the next.)
YES
Confirm every thermosensor is normal.
NO
Replace abnormal thermosensor, then confirm the lamp lights up. (If not, go to the next.)
YES
After keeping MAIN POWER in OFF condition for 3 minutes or more, turn ON the MAIN POWER and press POWER button. Confirm the ballast to generate a high-voltage pulse train and emits a sparking sound.
NO
A
When pressing the POWER button, connector A6 pin 13 changes from LOW to HIGH.
YES
NO
A2
YES
P
Confirm that no short circuit has occurred between connector P2 pins 1 and 3. (Normally, connector P2 pin 1 outputs 390 V ±20 V DC.)
YES
A
When pressing the POWER button, connector A4 pin 2 changes from LOW to HIGH.
NO
A3
NO
P
Confirm that no short circuit has occurred between connector P2 pins 4 and 3. (Normally, connector P2 pin 4 outputs 15 V ±1 V DC.)
YES
NO
①
②
A1
Microcomputer (IC1010) operation check in the standby mode
A
Does LED (D1024) nearby the microcomputer (IC1010) flash?
NO
A
The microcomputer is abnormal. Check the microcomputer (IC1010) and circuit around it, crystal oscillator (X1005) and reset IC (IC1016).
YES
A
POWER key check
Check conduction between connector A8 pin 3 (ON/OFF) and the microcomputer (IC1010) pin 104.
NG
A
Replace R1298.
OK
A2
A
Check MAIN/STB output signal of the microcomputer (IC1010 pin 85).
NG
A
Replace the microcomputer (IC1010).
OK
A
Replace Q1034.


A3
A
Check BLST_ON output signal of the microcomputer (IC1010 pin 43).
NG
A
Replace the microcomputer (IC1010).
OK
A
Replace Q1031.
The lamp lights up abnormally. (LAMP indicator flashes.)
After keeping MAIN POWER in OFF condition for 3 minutes or more, turn ON the MAIN POWER and press POWER button. Then confirm the lamp lights up.
NO
Replace the lamp unit.
YES
If the lamp goes out approximately 10 minutes after it lights up, the cumulative usage time of it exceeds 2 000 hours. Replace the lamp.
A shutdown occurs.
A S M
Abnormally high temperature is detected inside the projector and TEMP indicator illuminates or flashes. Check the following:
・Thermosensor connectors (S2, S1-A8, M1-A7) are connected.
・The ambient temperature is less than 44°C.
・The air filter does not accumulate dust.
Wait until the projector cools enough and turn on the power again.
A
If fan connectors (A15-A18) are not connected or the fans are stopped, a shutdown will occur. (TEMP and LAMP indicators are not illuminating.)
Confirm DC voltage is supplied to the fan.
NO
A
Confirm DC voltage (FAN13.5 V) is supplied to connector A6 pin 1.
YES
NO
Check the P-Module.
YES
Replace the fan.
OK
A
Check the fan voltage control ICs (IC1026-IC1029).
NG
A
Replace the IC.
If the microcomputer is out of order and temperature of the projector is not controlled, the thermofuse will be blown and the power will be stopped.
A
Microcomputer (IC1010) operation check
NG
A
Check circuit around the microcomputer (IC1010) or replace it.
OK
Replace the A-P.C.Board.


An abnormal picture or no picture appears.
A
Confirm every cable is connected and CPU test LED (D1024) illuminates?
NO
A
Connect or replace the cables.
If the LED does not illuminate, check the microcomputer (IC1010) and circuit around it, crystal oscillator (X1005) and reset IC (IC1016/IC1116).
YES
No picture appears in VIDEO input mode.
B1
No picture appears in S-VIDEO input mode.
NG
A
Confirm S-VIDEO input signals to A/D converter (IC1001).
Y: Pin 93 (S/Y_IN)
C: Pin 98 (S/C_IN)
NG
A
Check conduction and components [Q (Tr), D, C, R] between the input connector (JK1001) and the A/D converter (IC1001).
OK
B2
No picture appears in RGB input mode.
B3
No picture appears in YPBPR (YCBCR) input mode.
NG
A
Confirm input signals to A/D converter (IC1001).
Y, PB/CB, PR/CR : Pins 99, 96, 94
NG
A
Check conduction and components [Q (Tr), C, R] between the input connector and the A/D converter (IC1001).
Y, PB/CB, PR/CR :
JK1002 - IC1001 Pins 99, 96, 94
OK
B4
No picture appears in HDMI input mode.
B5
No picture appears. (Assuming that the microcomputer, lamp and remote control unit are normal.)
A
Confirm output waveforms on connectors A1, A2 and A3.
OK
Check connections between A-P.C.Board (A1, A2, A3) and LCD block, or replace the LCD block (LCD panels).
NG
A
Confirm clock signals (MCLK, LCDCLK) for the drive circuit.
Crystal oscillator (X1001) 28.6 MHz
Clock generator (IC1103)
Clock generator (IC1102)
NG
A
Replace the crystal oscillator (X1001).
Replace the clock generator (IC1103).
Replace the clock generator (IC1102).
OK
③

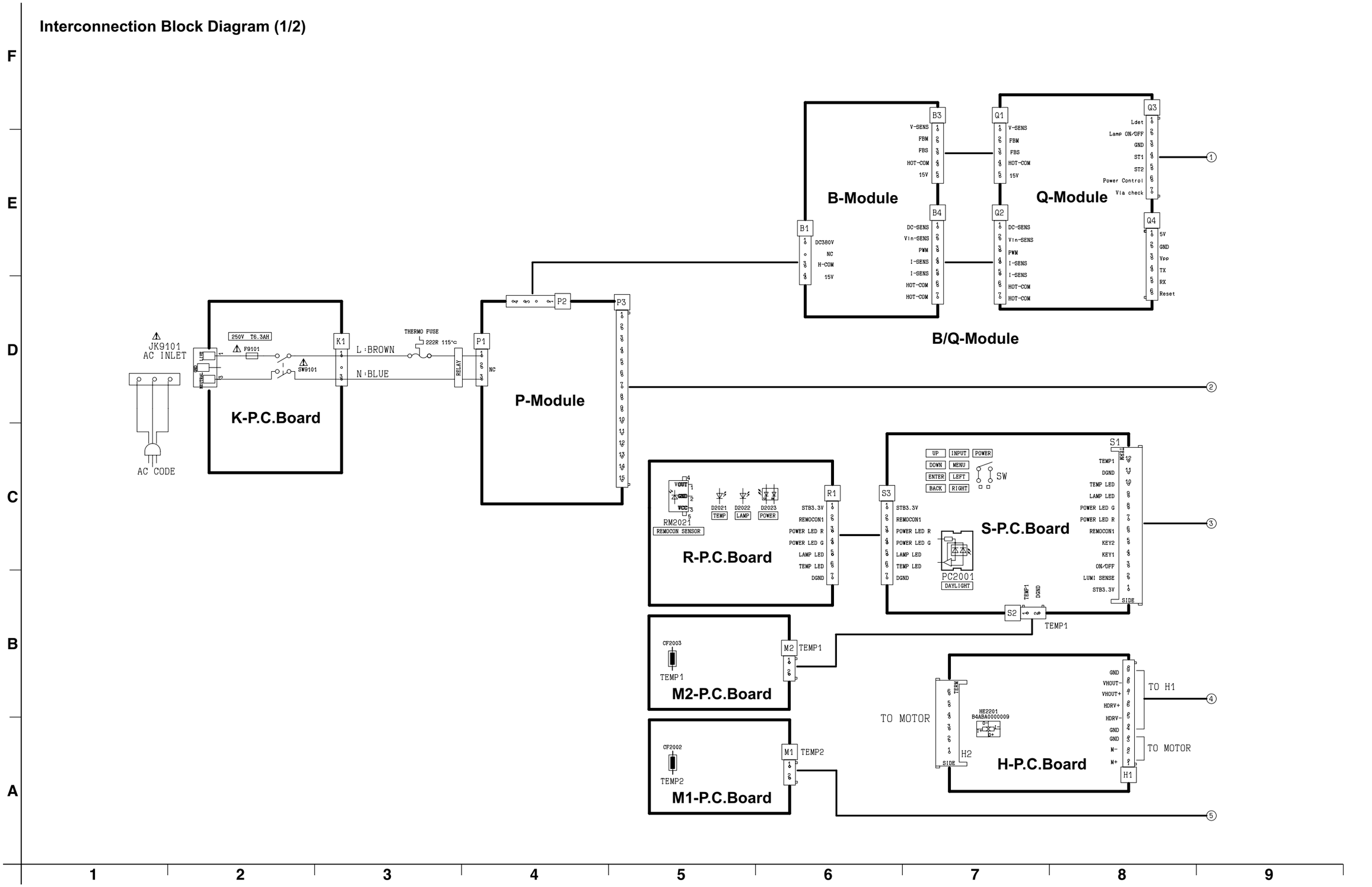

③
A
Video data check [Sampling hold ICs (IC1053, IC1055 and IC1057) outputs]
VID1: Every pin 50
LCCOM: Every pin 22
OK
A
Check circuits between output terminals of the sampling hold ICs (IC1053, IC1055 and IC1057) and connectors (A1, A2 and A3).
NG
A
Confirm input signals to sampling hold ICs (IC1053, IC1055 and IC1057)
D1IN2: Every pin 1
D1IN0: Every pin 77
OK
A
Check the sampling hold ICs (IC1053, IC1055 and IC1057).
If they are abnormal, check the power supply or replace them.
NG
A
Replace the A-P.C.Board.
B1
OK
A
Confirm input signal to A/D converter (IC1001).
VIDEO: Pin 95 (CVBS_RCA)
NG
A
Check conduction and components [Q (Tr), L, C, R] between the input connector (JK1001) and the A/D converter (IC1001).
OK
B2
A
Confirm output signals from A/D converter (IC1001).
R: Pins 24 - 33
G: Pins 36 - 45
B: Pins 46, 47, 52 - 55, 58 - 61
NG
A
PLL in the A/D converter (IC1001) operation check
Confirm the video signal and PLLHS are locked.
CVBS_RCA: Pin 95 (VIDEO)
S/Y_IN: Pin 93 (S-VIDEO/SCART)
S/C_IN: Pin 98 (S-VIDEO)
PIHS: Pin 17
PLLCK: Pin 51
NG
OK
A
Check data settings and power supply for the A/D converter (IC1001) or replace it.
A
Check power and peripheral circuits of the A/D converter (IC1001) or replace it.
OK
A
Replace the A-P.C.Board.


B3
A
Confirm RGB input signals to A/D converter (IC1001).
R: Pin 81
G: Pin 77
B: Pin 79
NG
A
Check conduction and components (FL, D, C, R) between the input connector (JK1005) and the analog switch.
OK
B4
A
Confirm output signals from A/D converter (IC1001).
R: Pins 24 - 33
G: Pins 36 - 45
B: Pins 46, 47, 52 - 55, 58 - 61
NG
A
PLL in the A/D converter (IC1001) operation check
Confirm HS_IN and PLL are locked.
HS_IN (HD): Pin 63
PIHS: Pin 17
PLLCK: Pin 51
OK
A
Replace the A-P.C.Board.
OK
NG
A
H-sync signal is not inputted to HS_IN (IC1001 pin 63)
Check power supply and I/O signals (HD and +3.3V) for AND gate (IC1137) or replace it.
A
Check data settings and power supply for the A/D converter (IC1001) or replace it.
B5
A
Confirm input signals to HDMI receiver (IC1001 pins 128, 129, 131, 132, 134, 135, 137 and 138).
NG
A
Check conduction between input connector (JK1004) and the HDMI receiver (IC1001).
OK
A
Replace the A-P.C.Board.

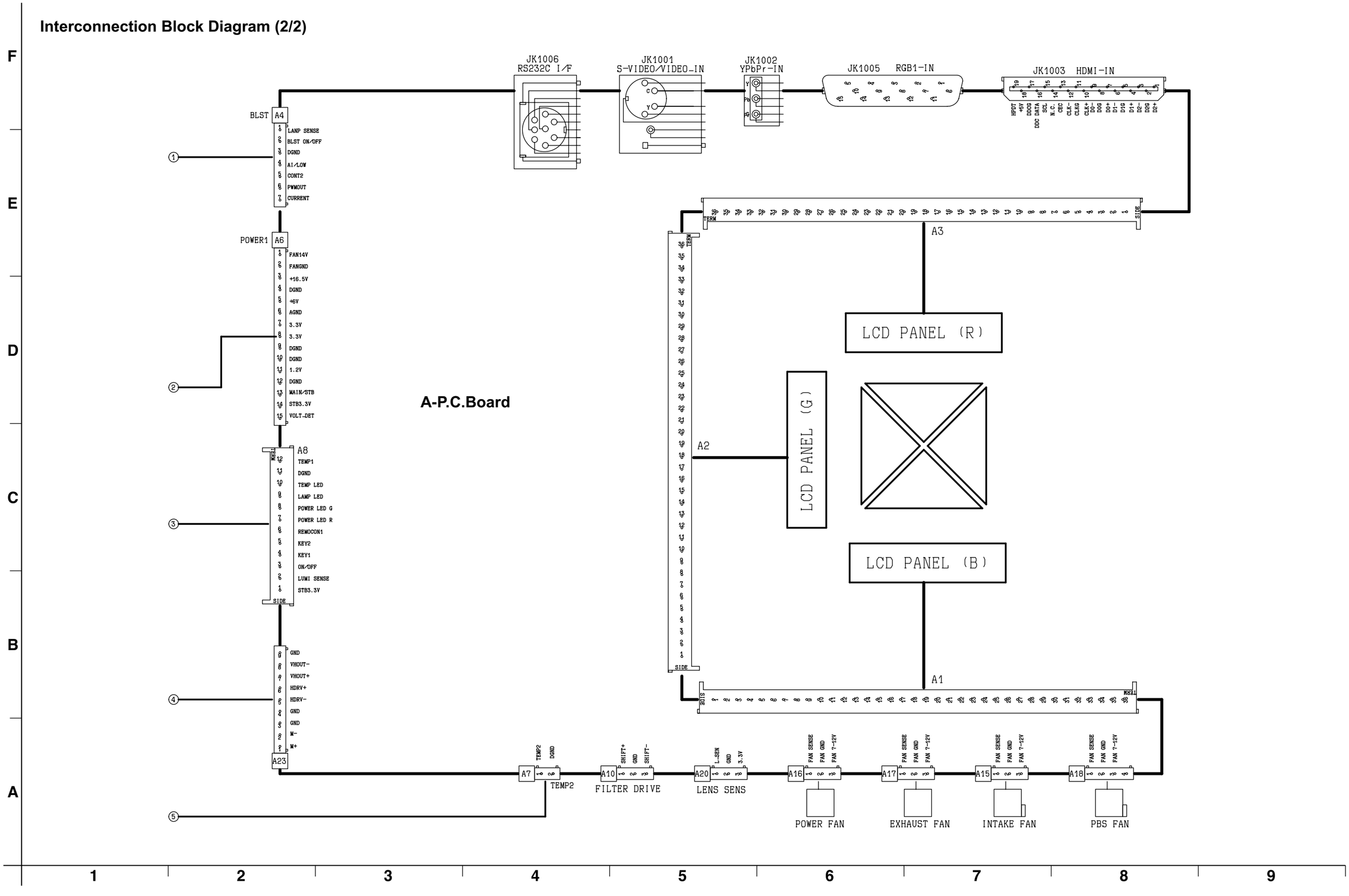

Remote control malfunction
Check the remote control unit.
NG
Replace the remote control unit.
OK
A
When the remote control unit is operated, check the remote control signal is inputted to the microcomputer (IC1010) pin 3.
NO
YES
Replace the A-P.C.Board.
A
Confirm connector A8 pin 6.
OK
A
Replace R1402.
NG
Replace the S-P.C.Board.

9 Interconnection Block Diagram

9.1. Interconnection Block Diagram (1/2)

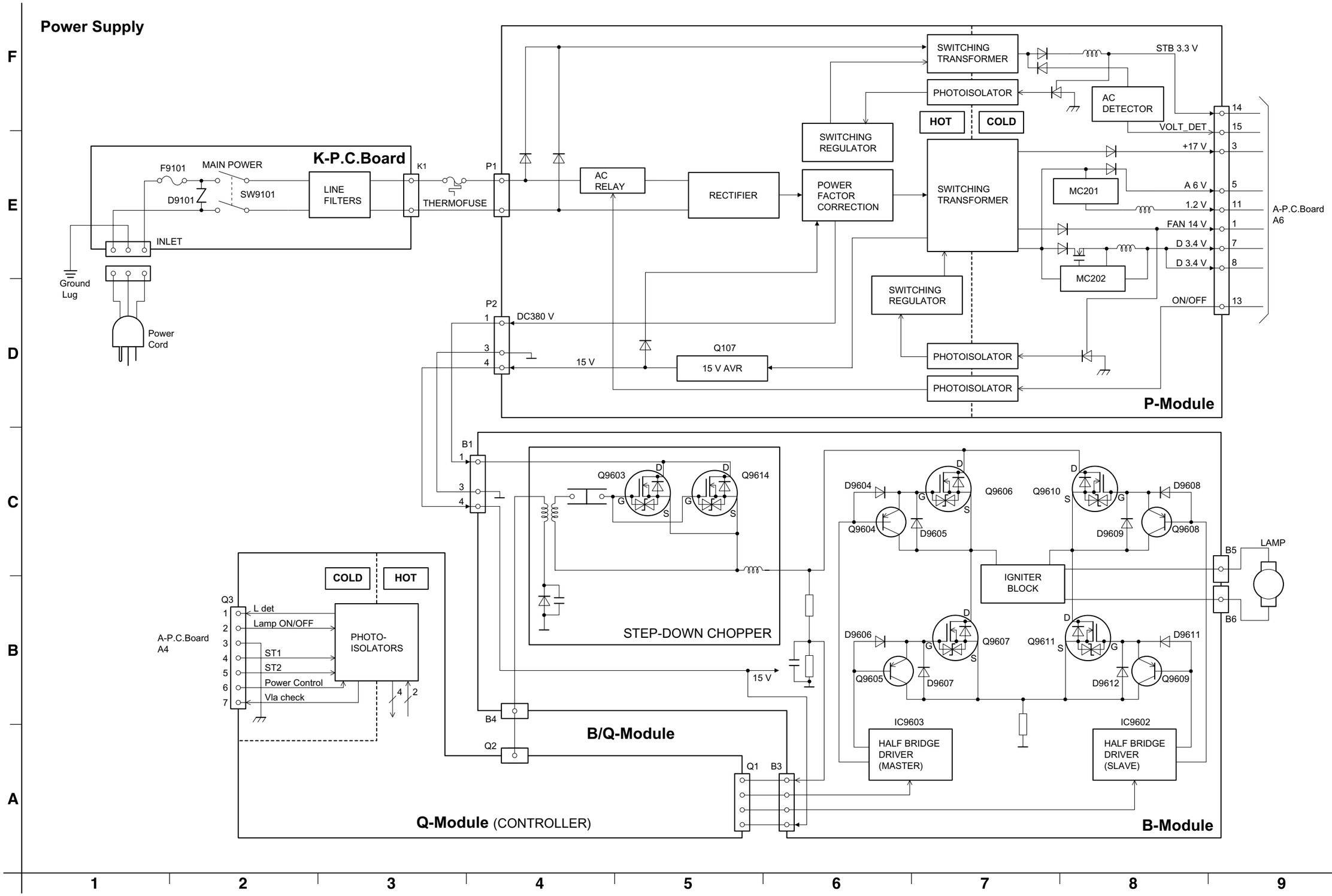


9.2. Interconnection Block Diagram (2/2)



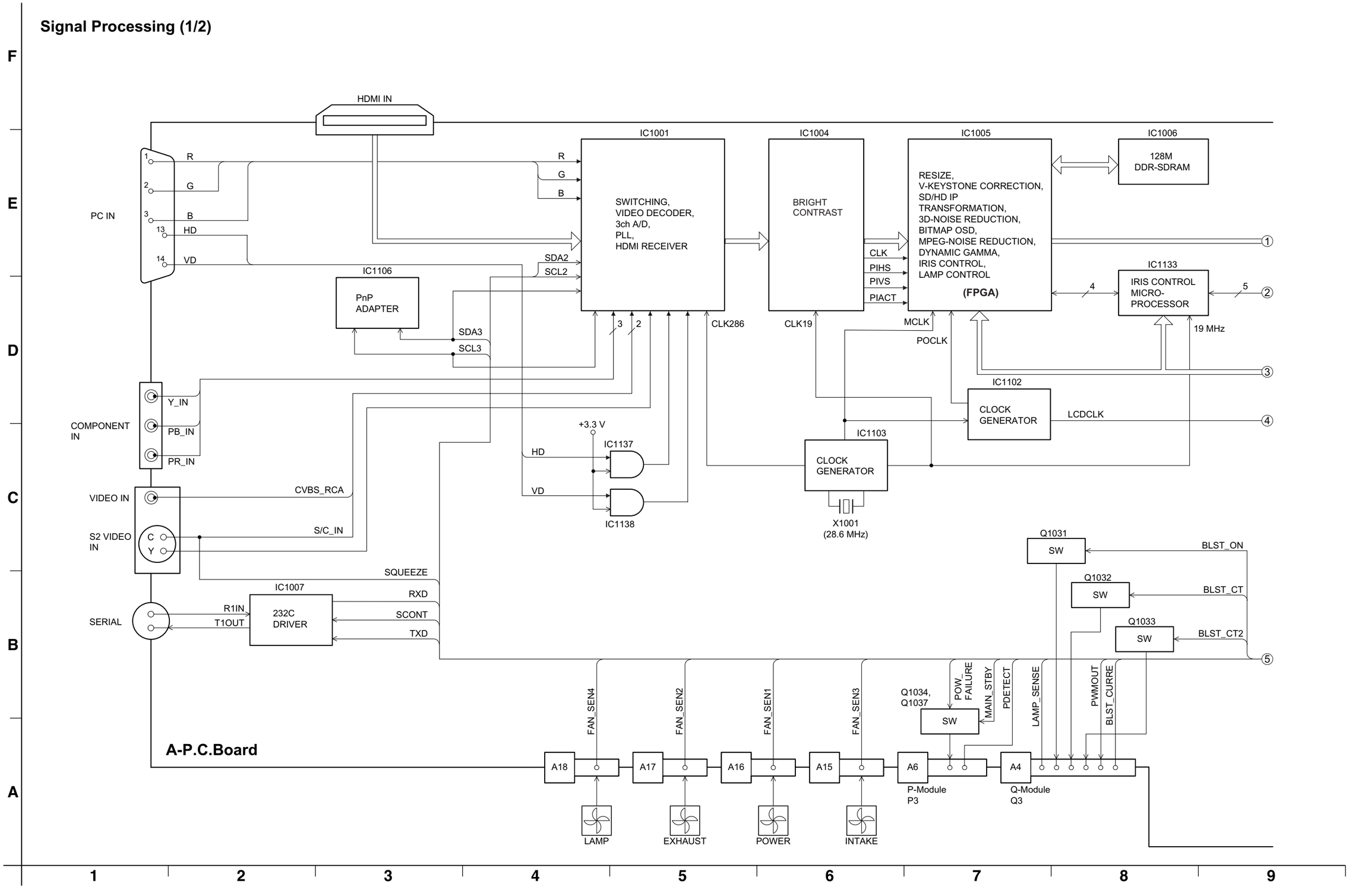
10 Block Diagram

10.1. Power Supply

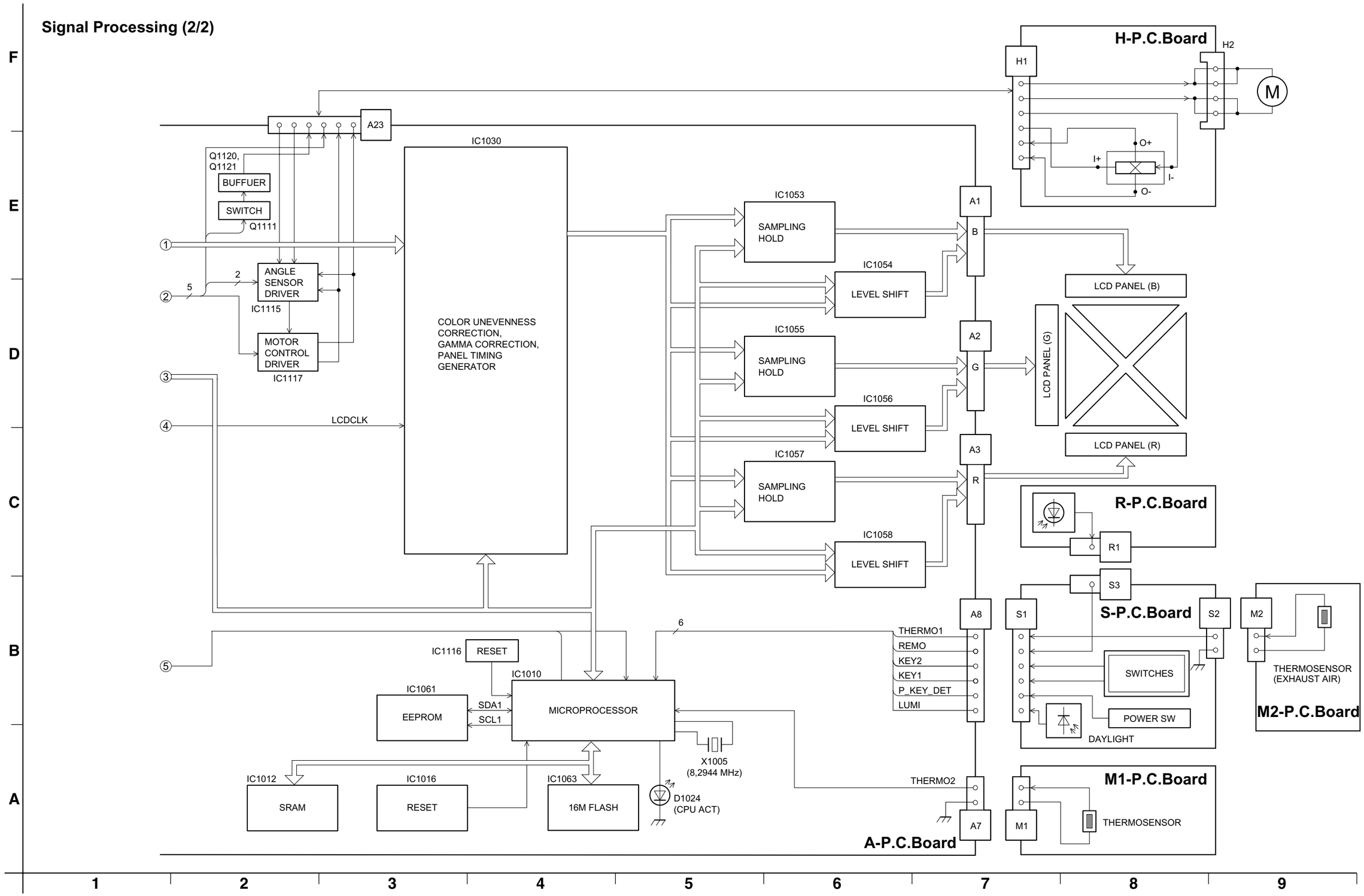


10.2. Signal Processing (1/2)

Signal Processing (1/2)



10.3. Signal Processing (2/2)



11 Schematic Diagram

Schematic Diagram for Model PT-AX100U

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK HAZARDS.
WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

Schematic Diagram for Model PT-AX100E

Important Safety Notice

Components identified by the international symbol ⚠ have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified ones.

Notes:

1. **Resistor**

   All the resistors are carbon 1/4W resistors, unless marked as follows: The unit of resistance is an OHM [Ω] (K=1 000 M=1 000 000).

   ○ : Nonflammable　　⊠ : Metal Oxide

   △ : Solid　　◎ : Metal Film

   ⊠ : Wire Wound　　⊗ : Fuse

2. **Capacitor**

   ⊗ : Temperature Compensation　　+ ⫫ − : Electrolytic

   Ⓜ : Polyester　　NP ⫫ : Bipolar

   ⓜ : Metalized Polyester　　Ⓣ : Dipped Tantalum

   ⊠ : Polypropylene　　Ⓩ : Z-Type

3. **Coil**

   The unit of inductance is a H, unless otherwise noted.

4. **Test Point**

   : Test Point

5. **Voltage Measurement**

   The voltage is measured by an electronic voltmeter receiving the colorbar signal when all the customer's controls are set to the standard condition.

6. **Color code for the links between diagrams and circuit boards**

From/To		To/From	Color code
Block diagram	⟷	Schematic diagram	Magenta
Schematic diagram	⟷	Schematic diagram	Green
Schematic diagram	⟷	Circuit boards	Yellow
Schematic diagram	⟷	Waveforms	Cyan (Light blue)

7. **HOT and COLD indications**

   The power circuit board contains a circuit area using a separate power supply to isolate the ground connection. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the precautions below:

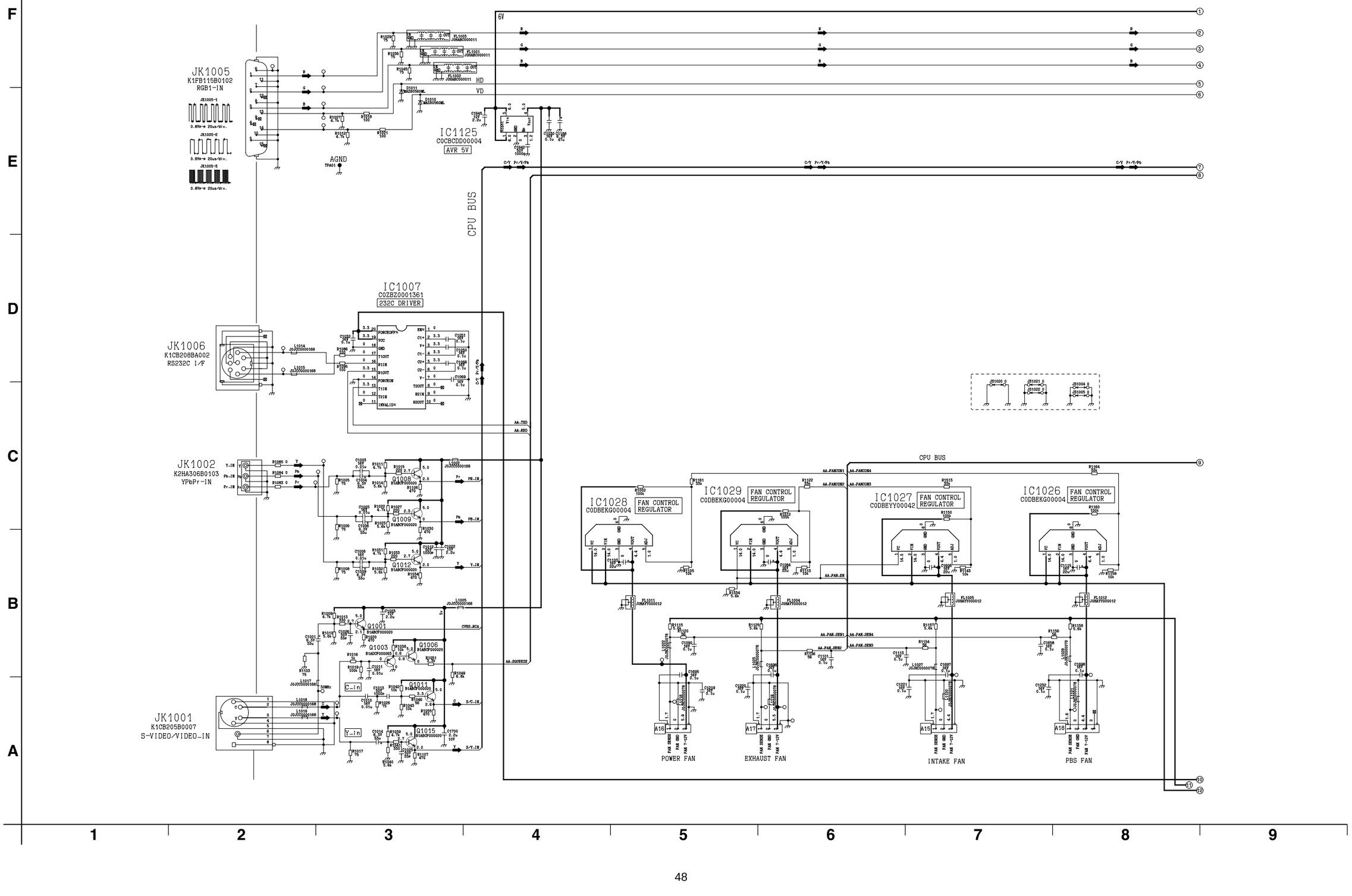
8. **This schematic diagram is the latest at the time of printing and the subject to change without notice.**

Precautions:

1. NEVER touch the HOT part or the HOT and COLD parts at the same time, or you may get an electric shock.
2. NEVER short-circuit the HOT and COLD circuits, or the fuse may blow and the parts may break.
3. NEVER connect an instrument such oscilloscope to the HOT and COLD circuit simultaneously, or the fuse may blow.Connect the ground of instruments to the ground of the circuit being measured.
4. MAKE SURE to unplug the power cord from the power outlet before removing the chassis.

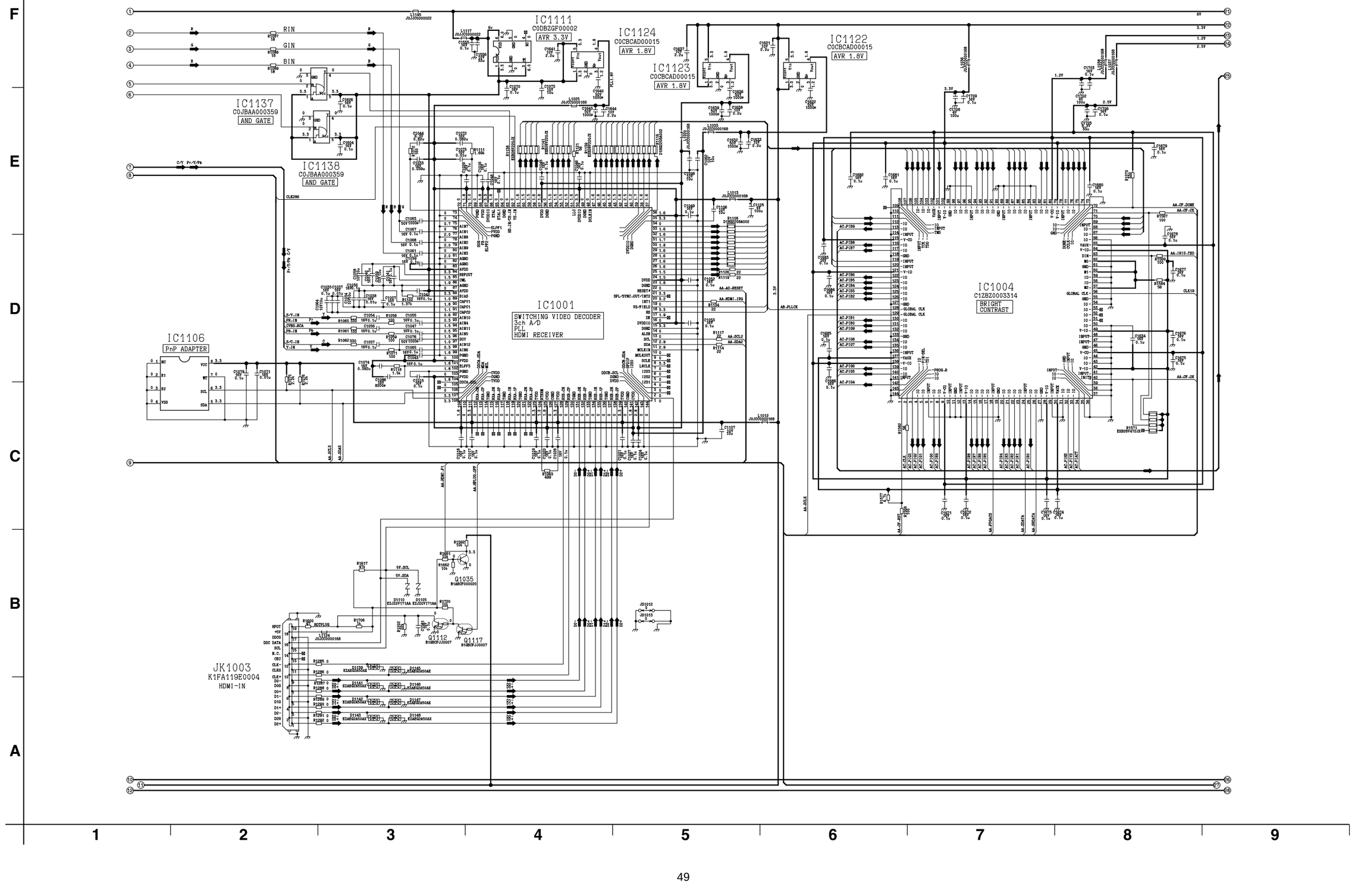
11.1. A-P.C.Board (1/7)

A-P.C.Board TXANP01VKD3 (1/7)



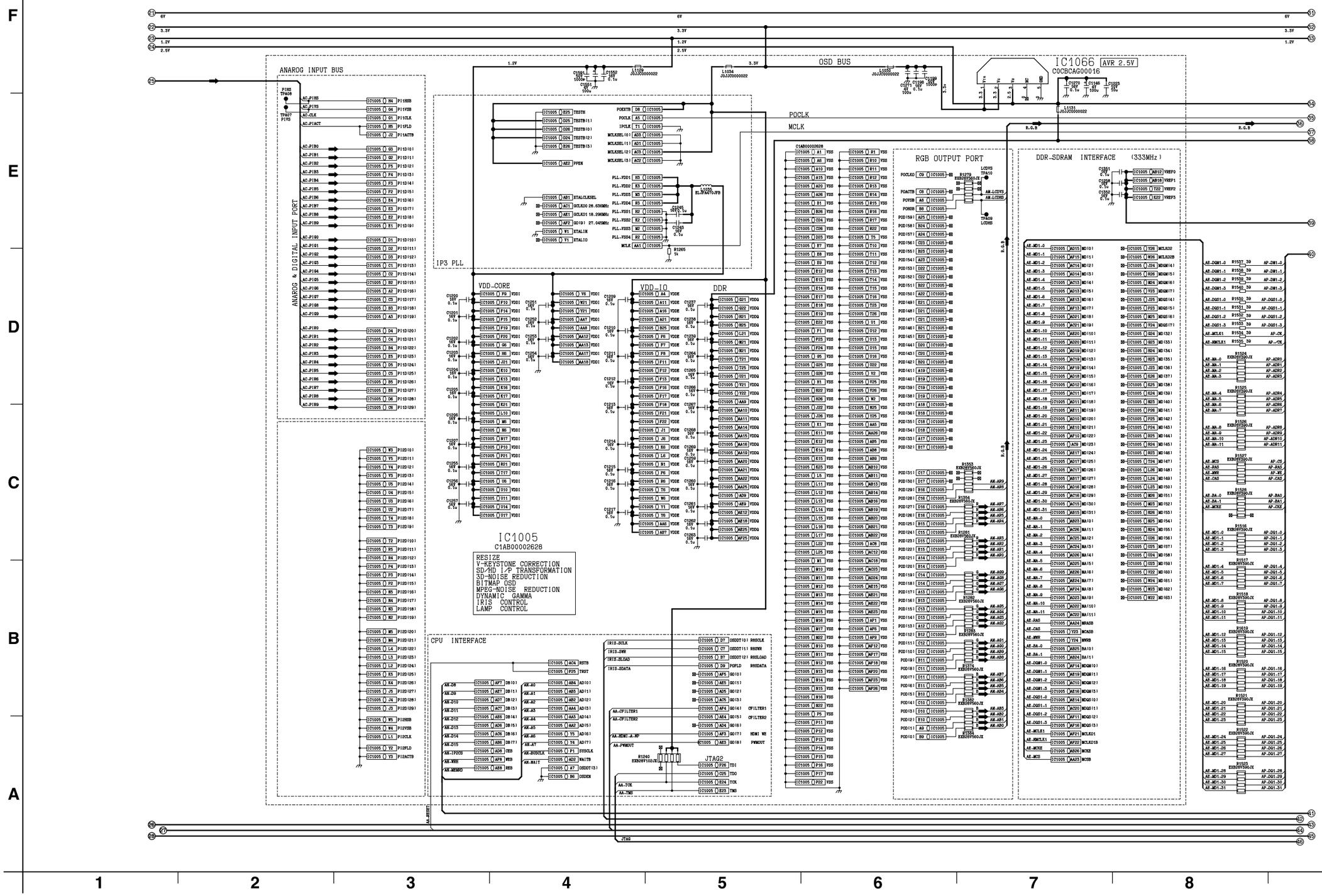
11.2. A-P.C.Board (2/7)

A-P.C.Board TXANP01VKD3 (2/7)



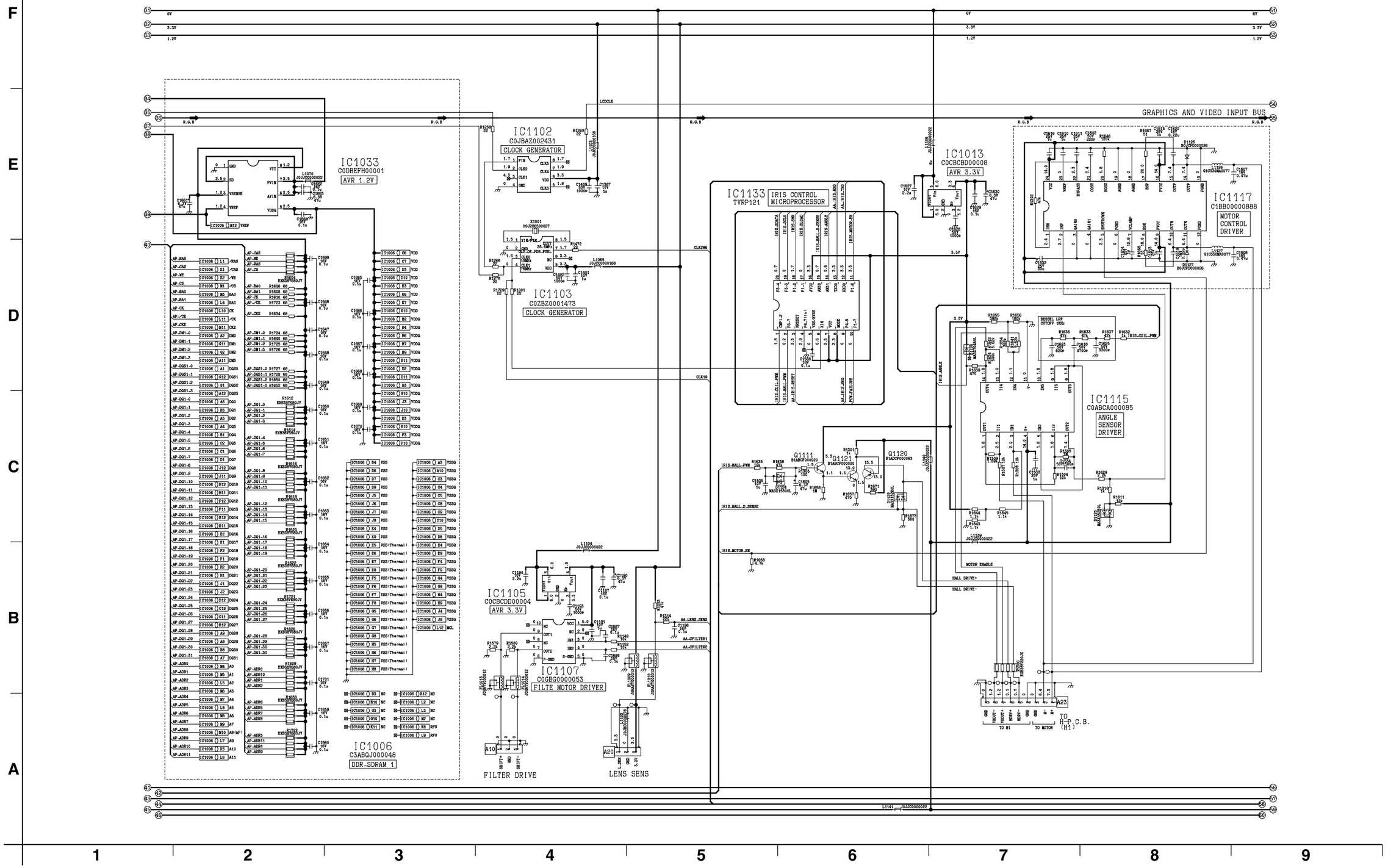
11.3. A-P.C.Board (3/7)

A-P.C.Board TXANP01VKD3 (3/7)



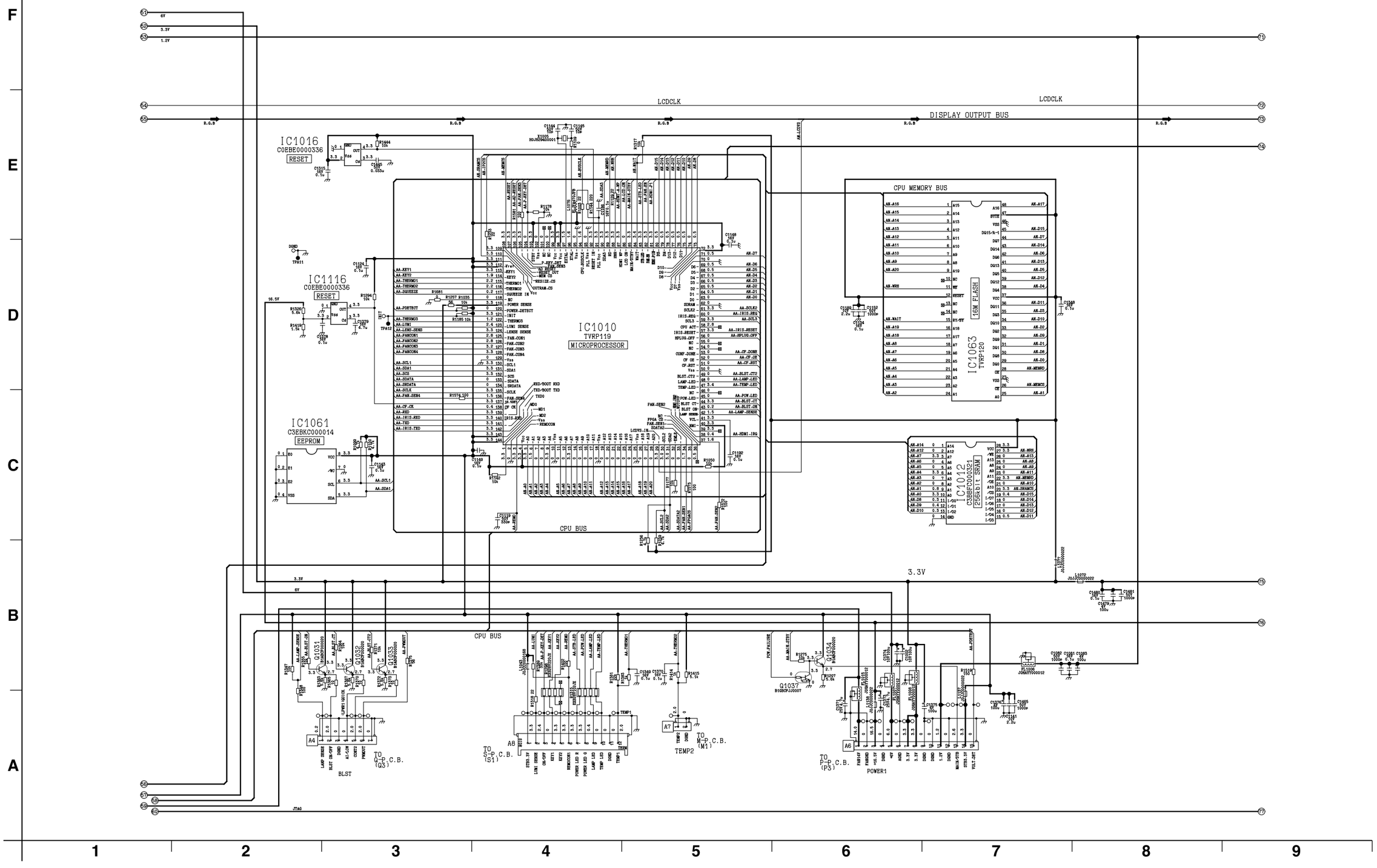
11.4. A-P.C.Board (4/7)

A-P.C.Board TXANP01VKD3 (4/7)



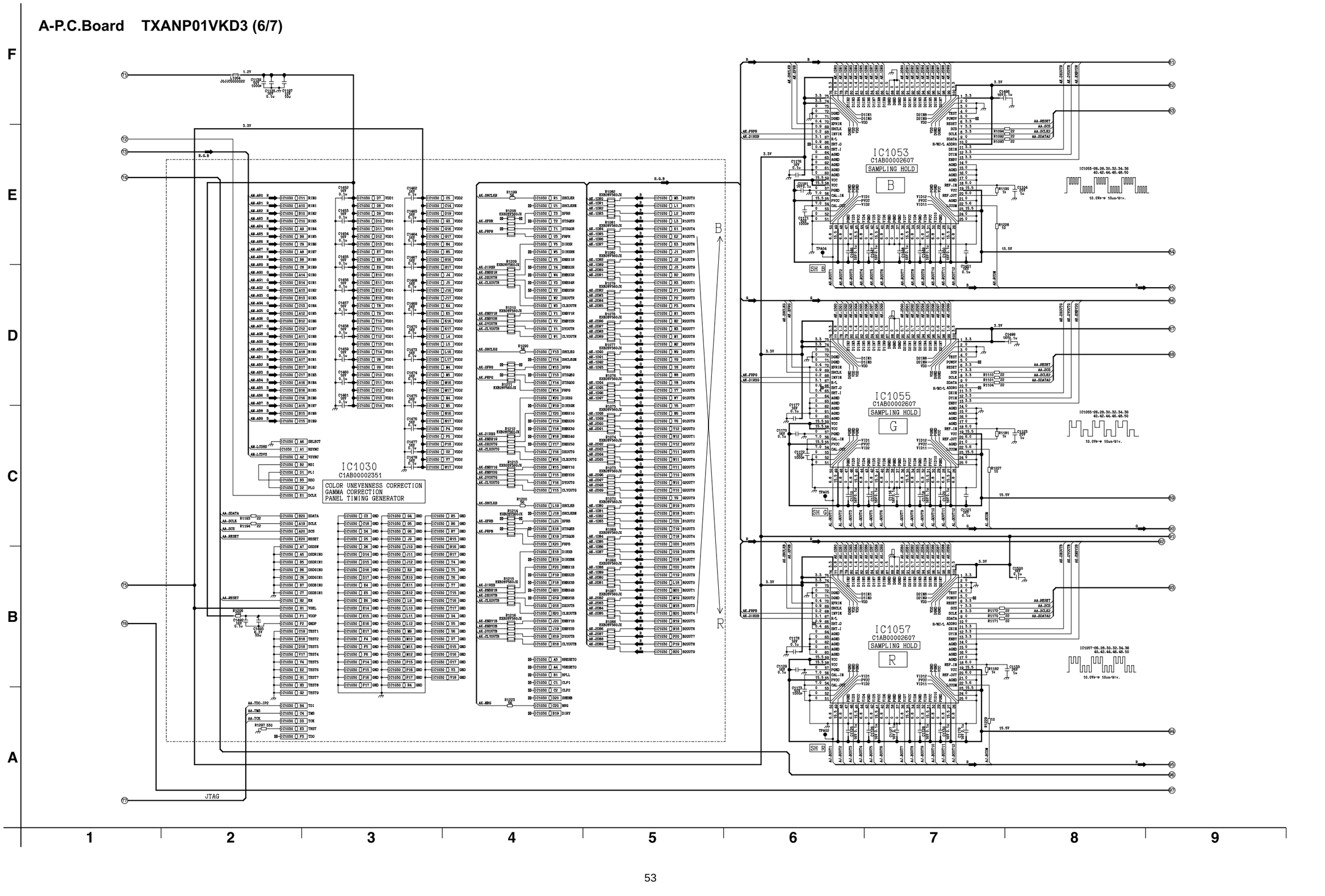
11.5. A-P.C.Board (5/7)

A-P.C.Board TXANP01VKD3 (5/7)



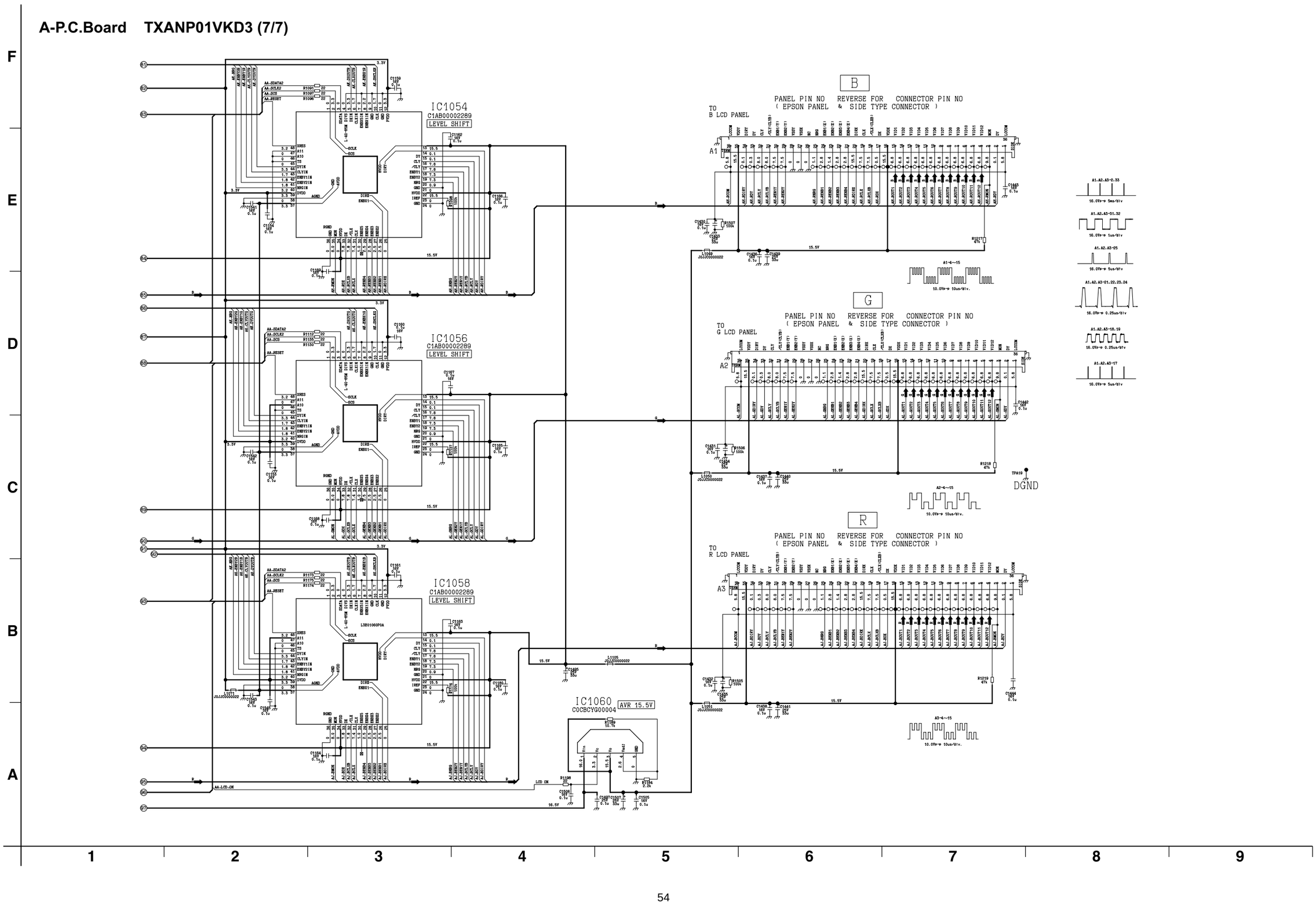
11.6. A-P.C.Board (6/7)

A-P.C.Board TXANP01VKD3 (6/7)



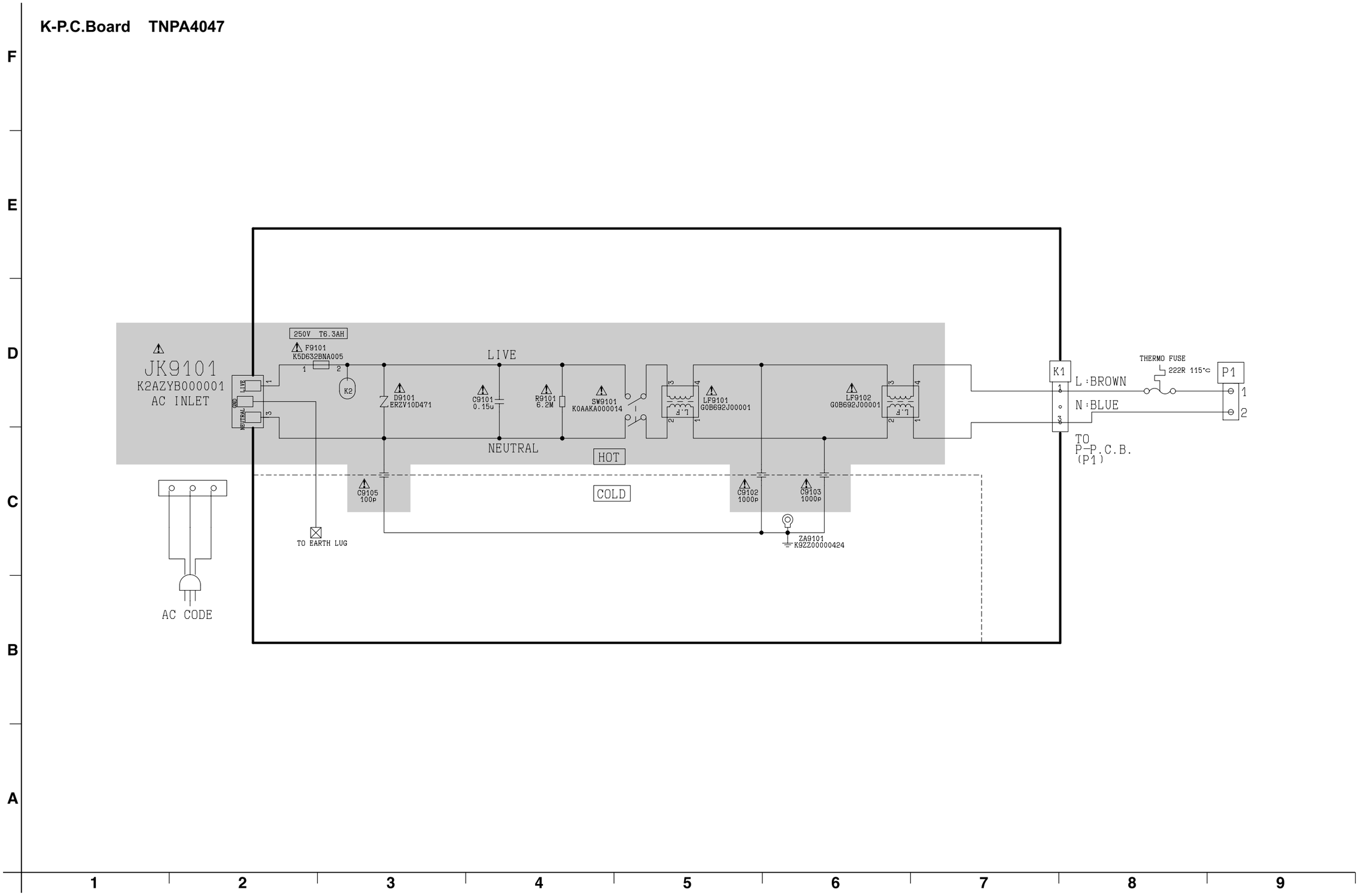
11.7. A-P.C.Board (7/7)

A-P.C.Board TXANP01VKD3 (7/7)



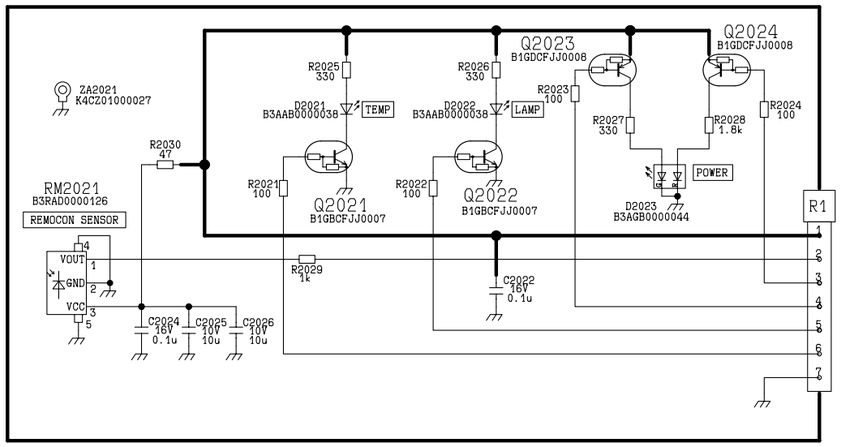
11.8. K-P.C.Board

K-P.C.Board TNPA4047

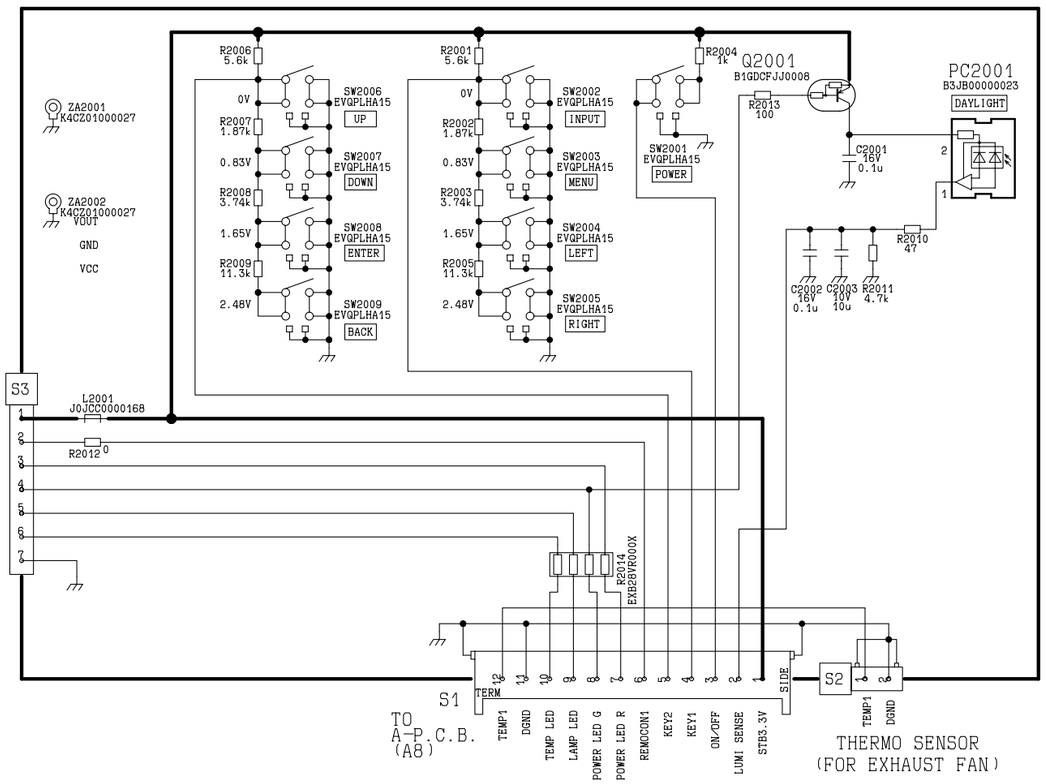


11.9. R-P.C.Board, S-P.C.Board, H-P.C.Board, M1-P.C.Board, M2-P.C.Board

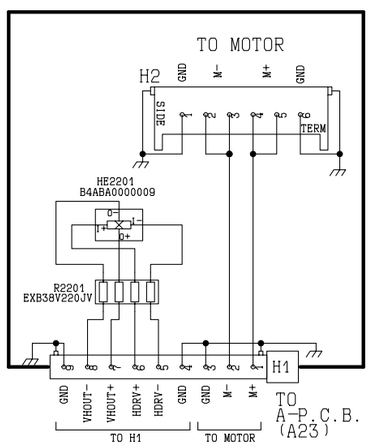
R-P.C.Board TNPA4075



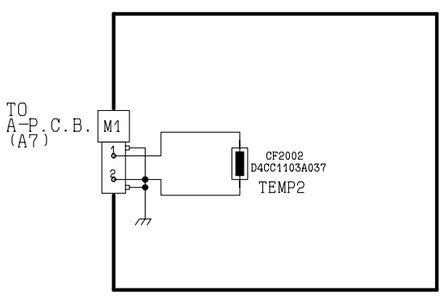
S-P.C.Board TNPA4064



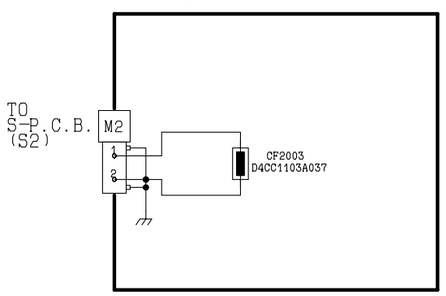
H-P.C.Board TNPA4065



M1-P.C.Board TNPA4106



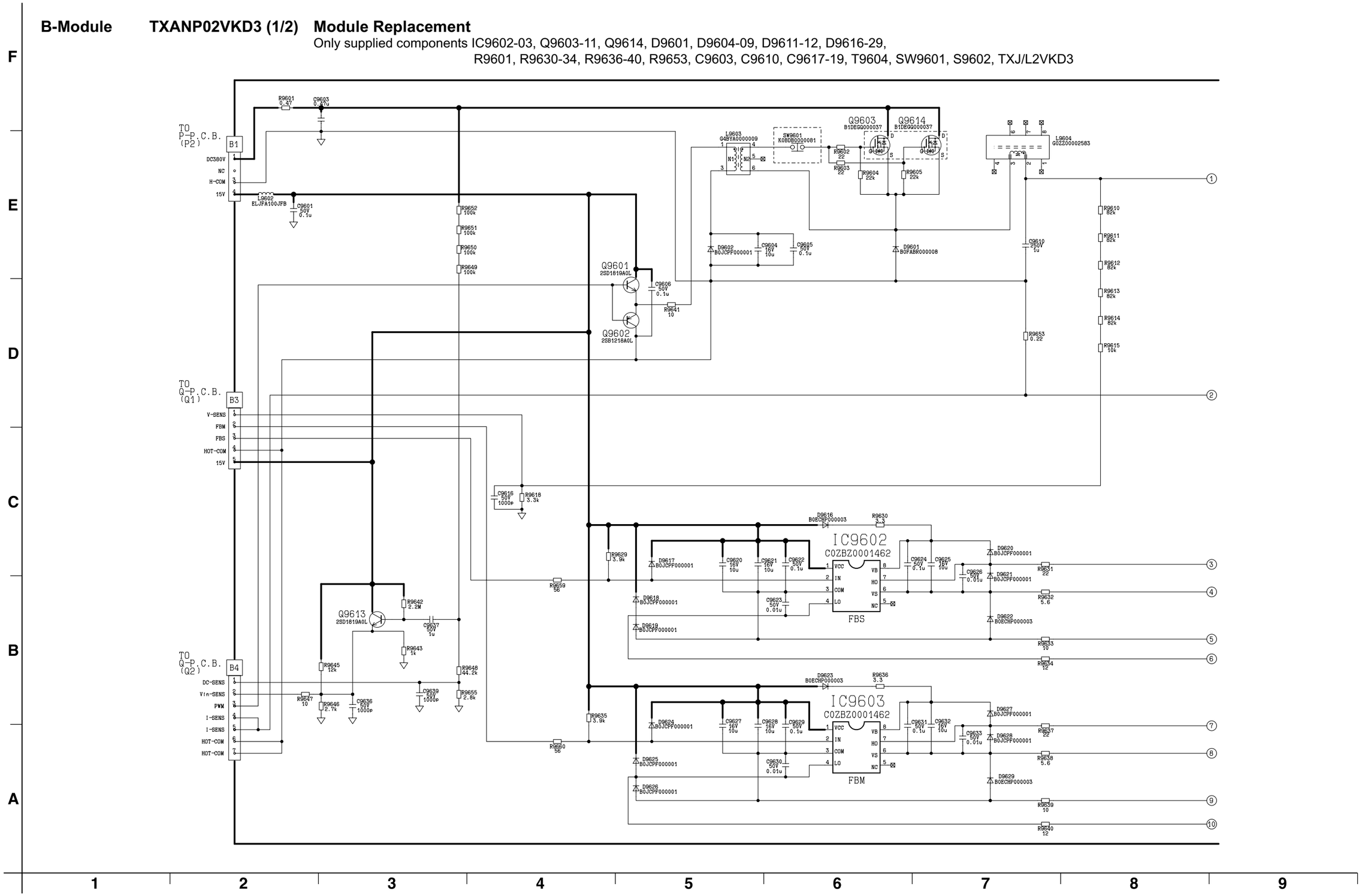
M2-P.C.Board TNPA4218



11.10. B-Module (1/2)

B-Module **TXANP02VKD3 (1/2)** **Module Replacement**

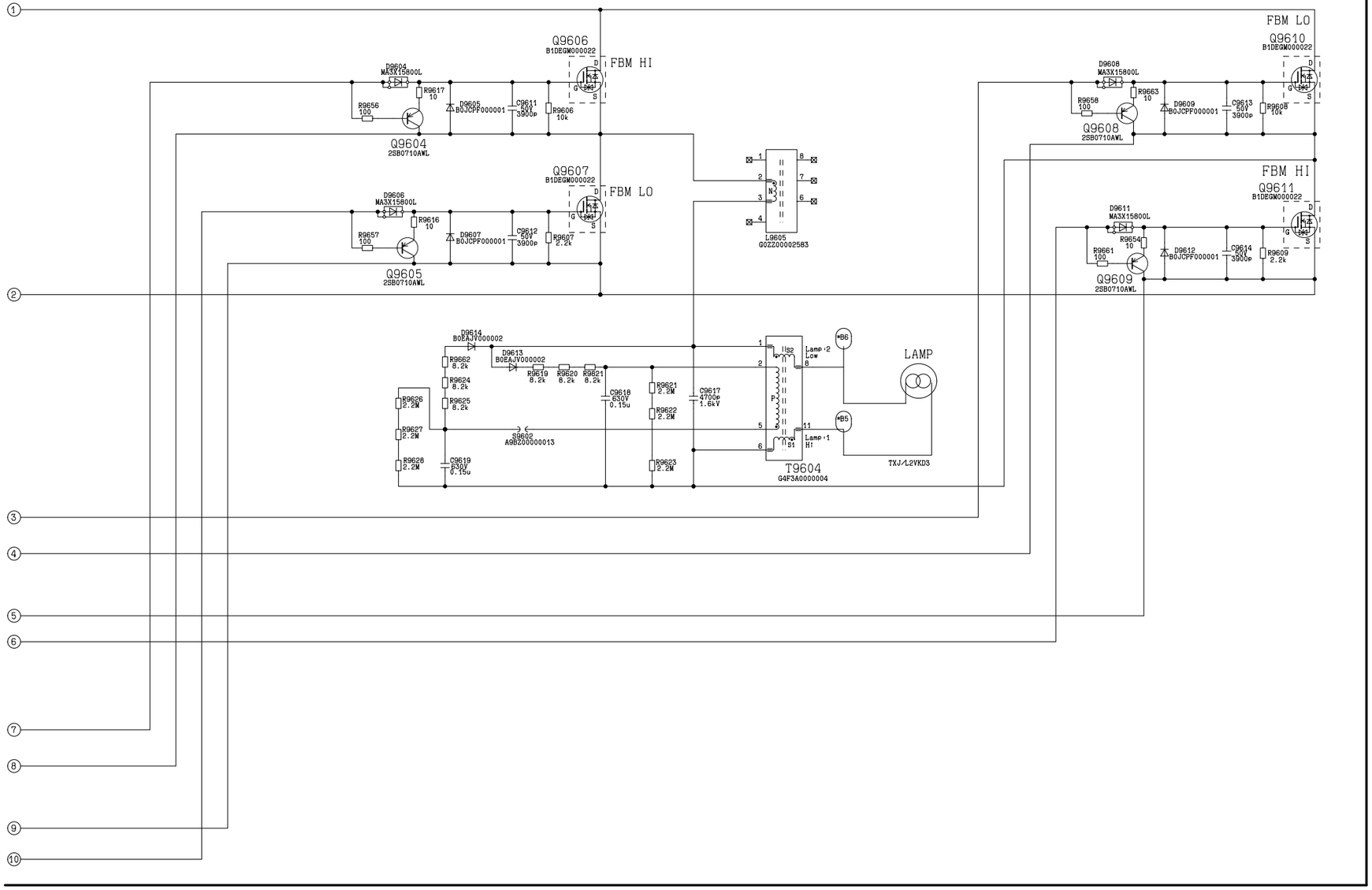
Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VKD3



11.11. B-Module (2/2)

B-Module **TXANP02VKD3 (2/2)** **Module Replacement**

Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-09, D9611-12, D9616-29,
R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VKD3



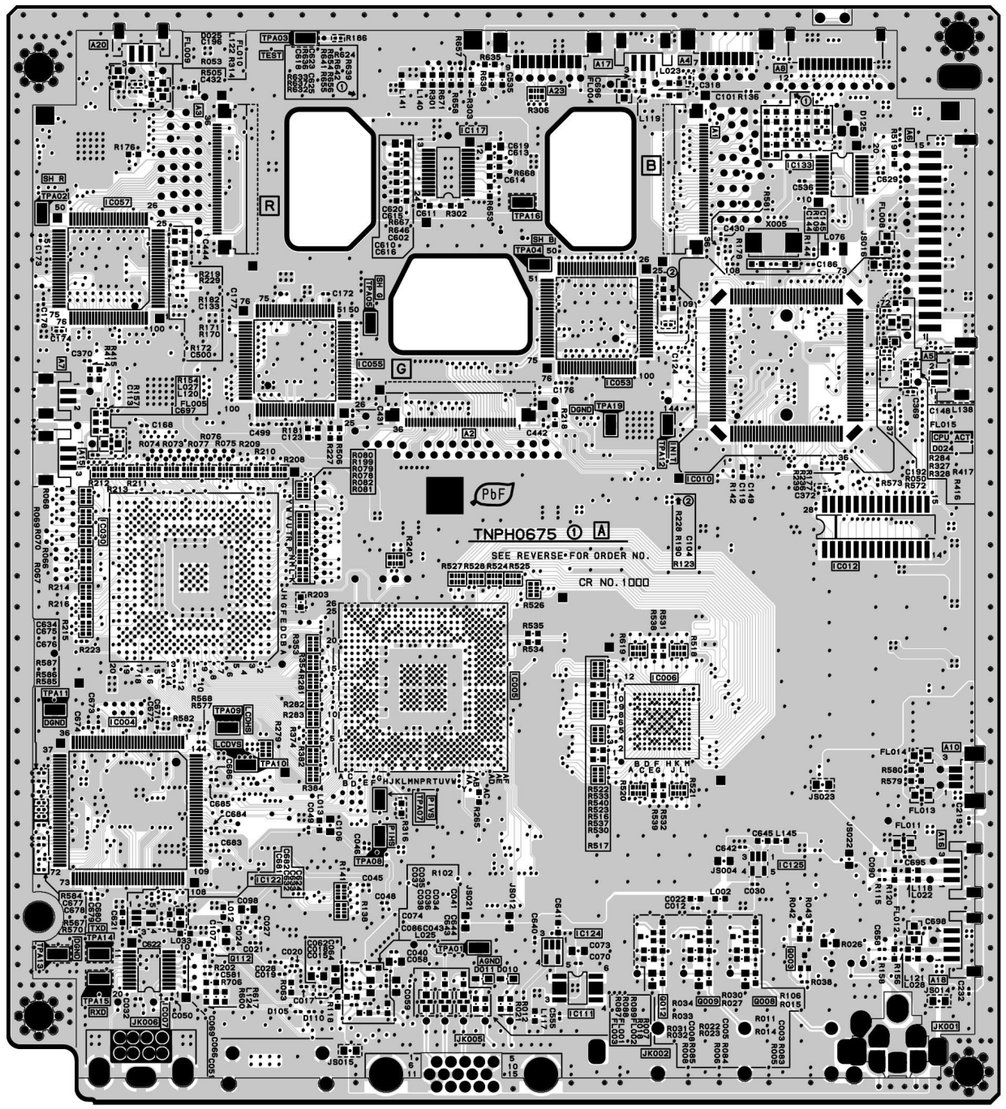
12 Circuit Boards

12.1. A-P.C.Board

A-P.C.Board TXANP01VKD3 (Foil Side)

A-P.C.Board (Foil Side)									
IC				TRANSISTOR		TP			
IC1004	B-1	IC1055	D-2	Q1003	A-4	TPA01	A-3	TPA10	B-2
IC1005	B-2	IC1057	D-1	Q1008	A-4	TPA02	D-1	TPA11	B-1
IC1006	B-3	IC1111	A-3	Q1009	A-3	TPA03	E-2	TPA12	C-3
IC1007	A-1	IC1117	D-2	Q1012	A-3	TPA04	D-3	TPA13	A-1
IC1010	C-4	IC1122	A-2	Q1112	A-2	TPA05	D-2	TPA14	A-1
IC1012	C-4	IC1124	A-3			TPA07	B-2	TPA15	A-1
IC1030	C-1	IC1125	B-4			TPA08	B-2	TPA16	D-3
IC1053	D-3	IC1133	D-4			TPA09	B-2	TPA19	C-3

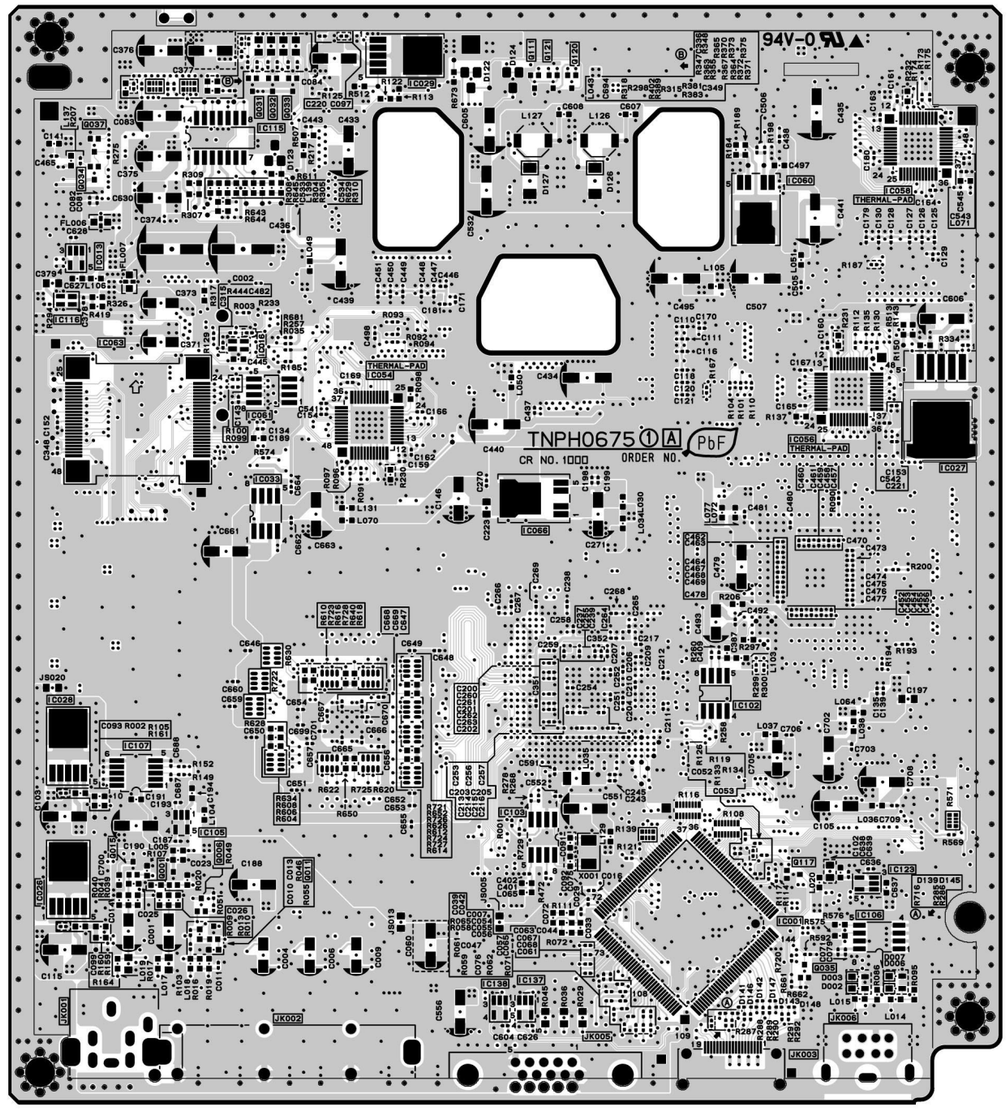
ADDRESS INFORMATION



A-P.C.Board TXANP01VKD3 (Component Side)

A-P.C.Board (Compone nt Side)									
IC						TRANSISTOR			
IC1001	A-8	IC1056	C-8	IC1106	A-8	Q1001	A-6	Q1037	D-5
IC1013	D-5	IC1058	D-9	IC1107	B-6	Q1006	A-6	Q1111	E-7
IC1016	D-6	IC1060	D-8	IC1115	D-6	Q1011	A-6	Q1117	B-8
IC1026	B-5	IC1061	C-6	IC1116	D-5	Q1015	B-5	Q1120	E-7
IC1027	C-9	IC1063	C-5	IC1123	B-8	Q1031	E-6	Q1121	E-7
IC1028	B-5	IC1066	C-7	IC1137	A-7	Q1032	E-6		
IC1029	E-7	IC1102	B-8	IC1138	A-7	Q1033	E-6		
IC1033	C-6	IC1103	B-7			Q1034	D-5		
IC1054	C-6	IC1105	B-6			Q1035	A-8		

ADDRESS INFORMATION

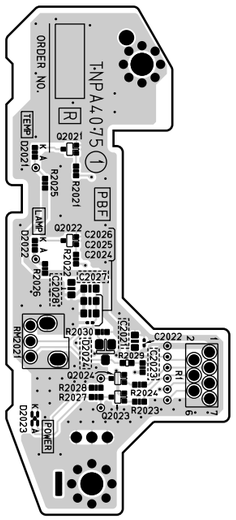


12.2. R-P.C.Board, S-P.C.Board

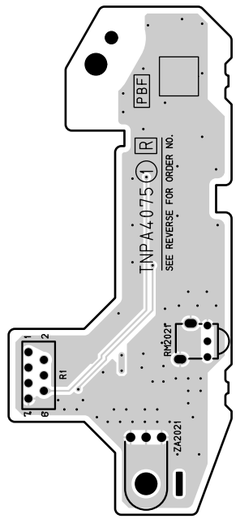
R-P.C.Board (Foil Side) TNPA4075

R-P.C.Board (Foil Side)	
TRANSISTOR	
Q2021	D-1
Q2022	D-1
Q2023	C-1
Q2024	C-1

ADDRESS INFORMATION



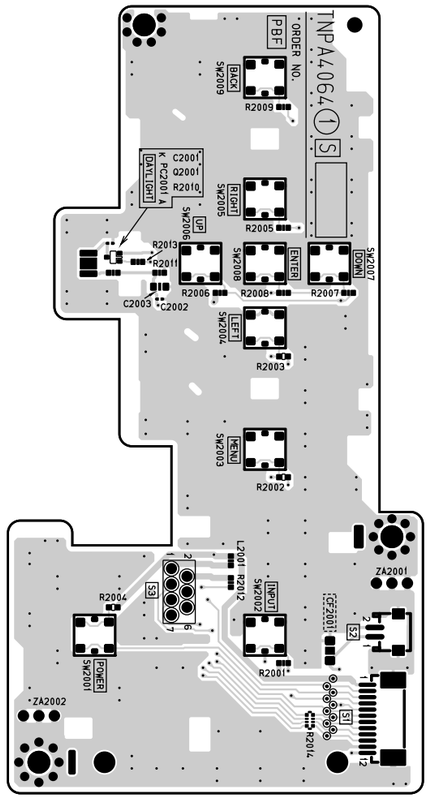
R-P.C.Board (Component Side) TNPA4075



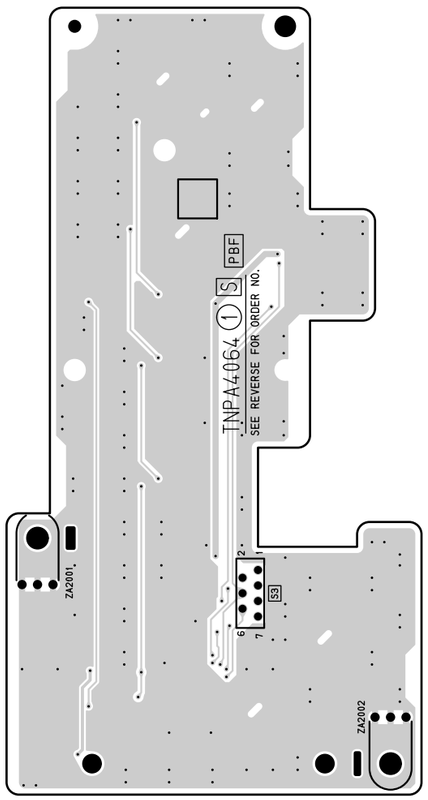
S-P.C.Board (Foil Side) TNPA4064

S-P.C.Board (Foil Side)	
TRANSISTOR	
Q2001	D-5

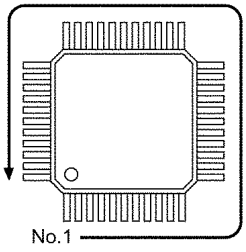
ADDRESS INFORMATION



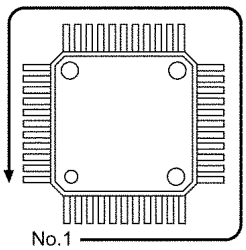
S-P.C.Board (Component Side) TNPA4064



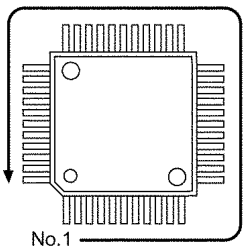
13 Terminal guide of ICs and transistors



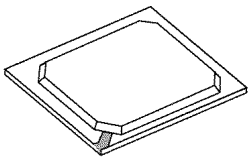
C1AB00002289 48 Pin



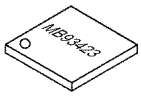
C1AB00002650 144 Pin



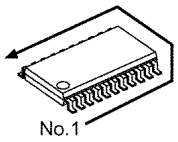
C1AB00002607 100 Pin
TVRP119 144 Pin



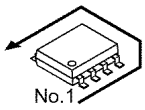
C1AB00002351
C1AB000022628



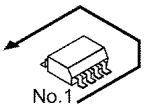
C3ABQJ000048



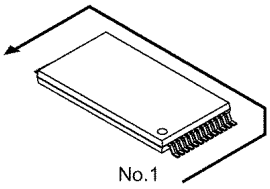
C1BB00000888 24 Pin
TVRP121 20 Pin
C0ZBZ0001361 20 Pin
C0ABCA000085 14 Pin



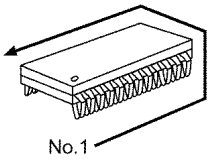
C0DBEFH00001 8 Pin
C0GBG0000053 8 Pin
C3EBEC000054 8 Pin



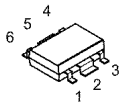
C3EBDC000067 8 Pin
C3EBKC000014 8 Pin



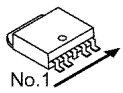
TVRP120 48 Pin



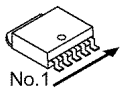
C3BBFC000321 28 Pin



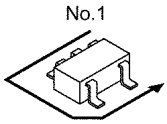
C0DBZGF00002 6 Pin



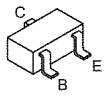
C0CBCYG00004 4 Pin
C0CBCAG00016 4 Pin



C0DBEKG00004 5 Pin
C0DBEYY00042 5 Pin



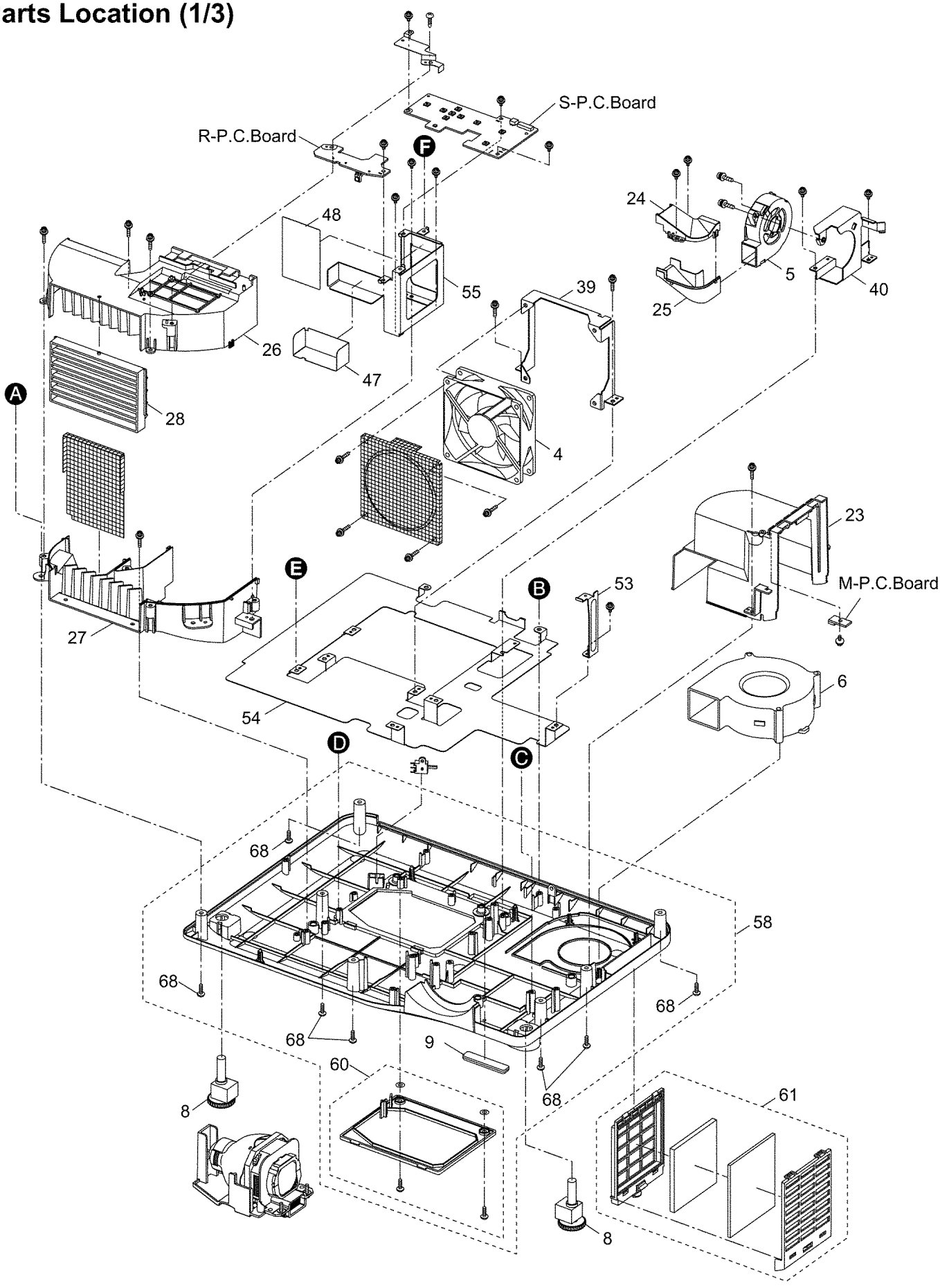
C0CBCAD00015 5 Pin
C0CBCDD00004 5 Pin
C0JBAA000359 5 Pin



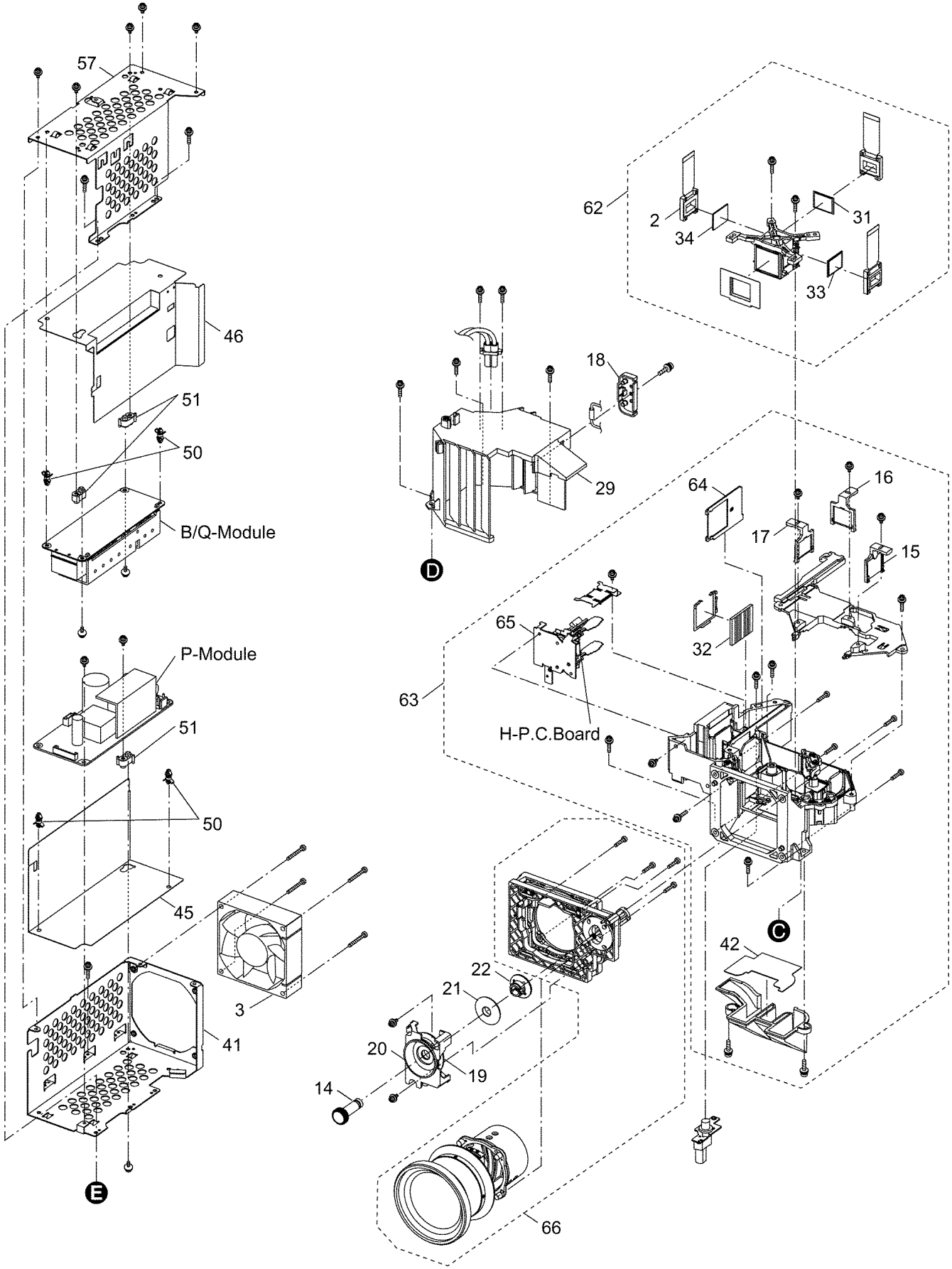
2SB1218A0L
2SD1819A0L

14 Exploded Views

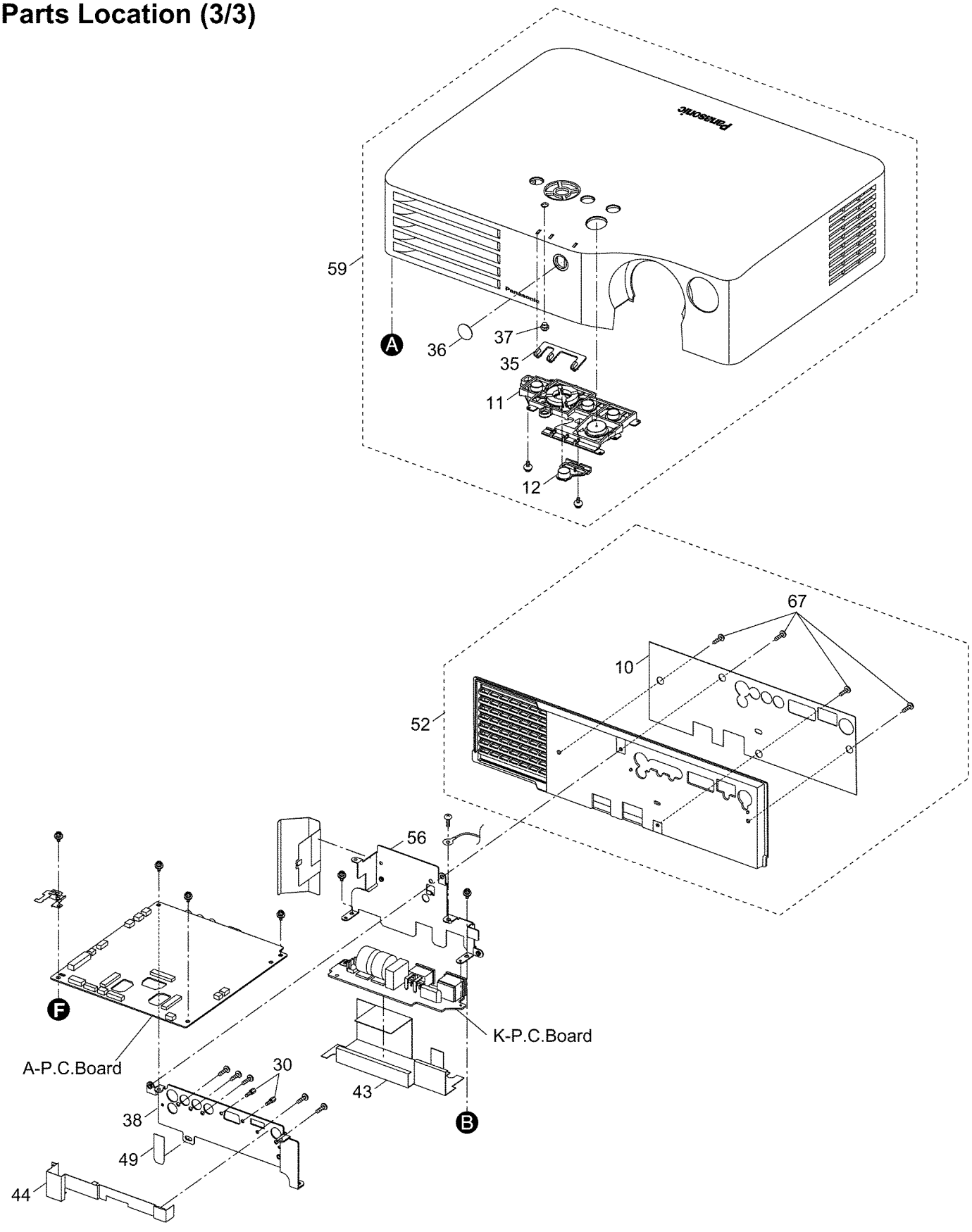
Parts Location (1/3)



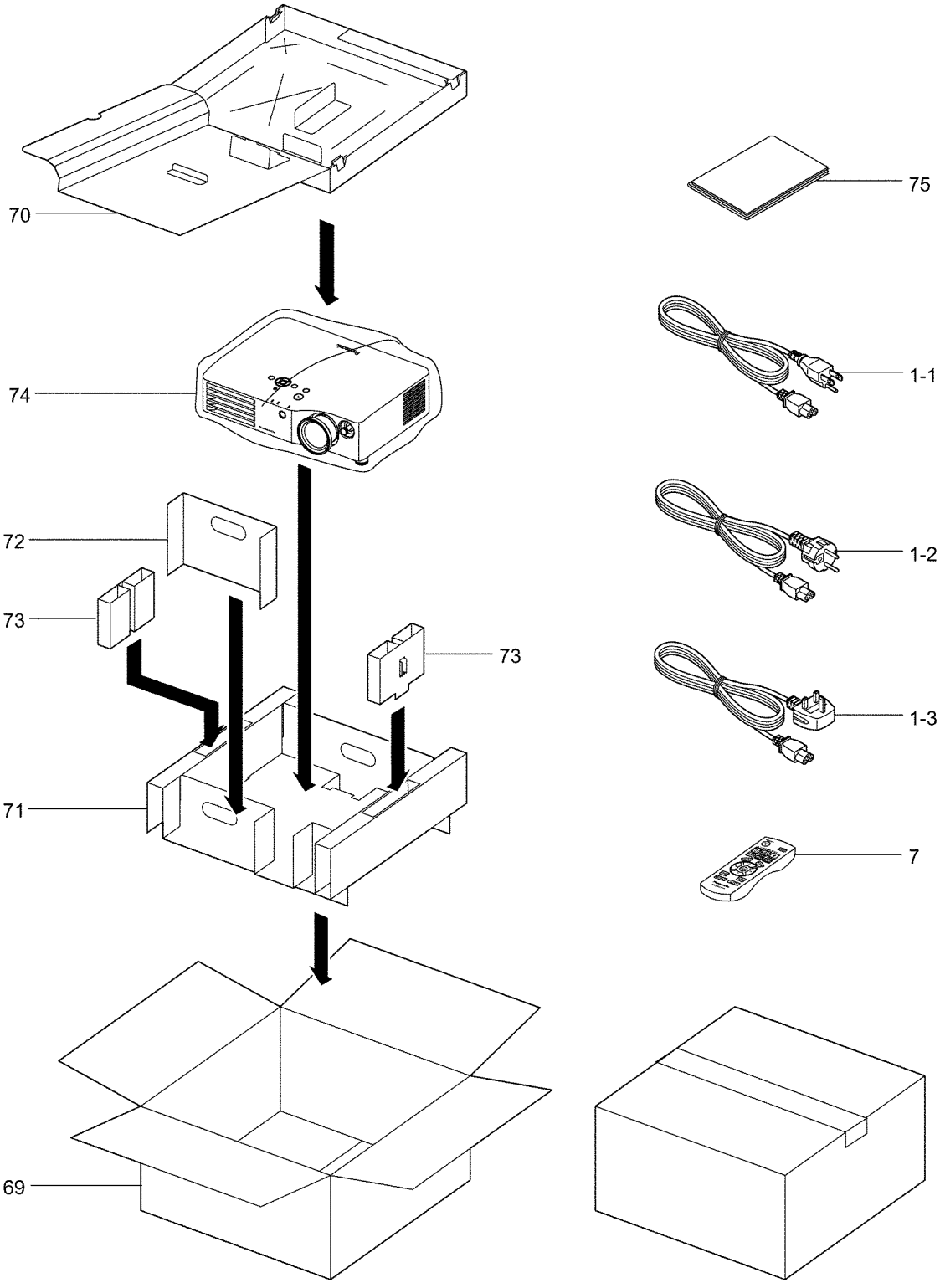
Parts Location (2/3)



Parts Location (3/3)



Packing Parts



15 Replacement Parts List

Important Safety Notice

Components identified by the International symbol ⚠ have special characteristics important for safety.
When replacing any of these components, use only the manufacturer's specified parts.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Carbon	F : ± 1 %
F : Fuse	G : ± 2 %
M : Metal Oxide	J : ± 5 %
Metal Film	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

2. Capacitor

Example:

ECKF1H103ZF C 0.01PF, Z, 50V

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Ceramic	C : ±0.25 pF
E : Electrolytic	D : ±0.5 pF
P : Polyester	F : ± 1 pF
PP : Polypropylene	J : ± 5 %
S : Polystyrol	K : ±10 %
T : Tantalum	L : ±15 %
	M : ±20 %
	P : +100 %, -0 %
	Z : +80 %, -20 %

Notes:

Printed circuit board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Name & Description	Remarks
	[MECHANICAL PARTS]		
	D4CDY4930003	TEMP SENSOR	⚠
	J0KG00000052	CORE	⚠
1-1	K2CG3FR00001	POWER CORD	⚠ PT-AX100U
1-2	K2CM3FR00002	POWER CORD(EUROPE)	⚠ PT-AX100E
1-3	K2CT3FR00003	POWER CORD(UK)	⚠ PT-AX100E
2	L5BDAYY00022	LIQUID CRYSTAL DISPLAY B	
	L5BDAYY00025	LIQUID CRYSTAL DISPLAY B	
3	L6FAYYYH0028	POWER FAN	⚠
4	L6FAYYYH0029	VENTILATION FAN	⚠
5	L6FCYYYH0009	LAMP FAN	⚠
6	L6FCYYYH0010	SIROCCO FAN (INHALATION)	⚠
7	N2QAYB000064	REMOTE CONTROLLER	
8	TBLB0047-1	ADJUST LEG	
9	TBLG3042-1	RUBBER LEG (REAR)	
	TBMA160-1	LOGO BADGE	
	TBMG385	MODEL NAME PLATE	PT-AX100U
	TBMG386	MODEL NAME PLATE	PT-AX100E
	TBMG388	MODEL NO. LABEL	PT-AX100U
	TBMG389	MODEL NO. LABEL	PT-AX100E
10	TBMU690	TERMINAL SHEET	
11	TBXA49801	CONTROL BUTTON	
12	TBXA49902	CONTROL BUTTON 2	
14	TEEC0043	SHIFT LEVER ASSY	
15	TEEC0044	POLARIZING PLATE/IN R	
16	TEEC0045	POLARIZING PLATE/IN G	
17	TEEC0046	POLARIZING PLATE/IN B	
18	TEEC5120	TEMP FUSE INSTALL METAL	
19	TEEC5180-1	MASK MECHA 1	
20	TEEC5181-1	MASK MECHA 2	
21	TEEC5182-1	MASK MECHA 3	
	TEEC5212	SHIFT LEVER	
22	TEEC5214	SHIFT LOCK	
24	TEEC5248	LAMP DUCT 1	
25	TEEC5249	LAMP DUCT 2	
26	TEEC5250	VENTILATION DUCT 1	
27	TEEC5251	VENTILATION DUCT 2	
28	TEEC5252	VENTILATION LOBAR	
	TEEC5289	SHIFT COVER	
	TESD067-1	SPRING	

Ref. No.	Part No.	Part Name & Description	Remarks
	TEWA644	BUSTERAID	
	TEWA833	FILM IMPEDOR	
30	THEC084N	D-SUB SCREW	
31	TKGP0035	POLARIZING PLATE/OUT G	
	TKGP0036	POLARIZING PLATE/OUT G	
32	TKGP5240	PBS	
33	TKGP5280	POLARIZING PLATE/OUT R	
	TKGP5281	POLARIZING PLATE/OUT R	
34	TKGP5326	POLARIZING PLATE/OUT B	
	TKGP5329	POLARIZING PLATE/OUT B	
35	TKKC5252	LED PLATE	
36	TKKC5253	REMOTE RECEIVER PLATE	
37	TKKC5254	ILLUMINATION SENSOR PLATE	
	TKKL5372	LENS COVER	
38	TKZF5048	TERMINAL MEATL	
39	TKZJ5066	VENTILATION FAN METAL	
40	TKZJ5067	LAMP FAN METAL	
41	TKZJ5068	POWER FAN INSTALL METAL	
	TMKG740	SHEET	
	TMKX100	WASHER	
	TMKX988	TAPE	
42	TMKY111	DUCT COVER	
43	TMKY116	INSULATION SHEET(K-PCB)	
44	TMKY117	INSULATION SHEET(A-PCB)	
45	TMKY118	POWER INSULATION SHEET	
46	TMKY119	BALLAST INSULATION SHEET	
	TMKY149	POWER INSULATION SHEET 1	
47	TMKY150	INSULATION SHEET 1 (S-PCB)	
48	TMKY151	INSULATION SHEET 2 (S-PCB)	
49	TMKY152	INSULATION SHEET 2 (A-PCB)	
	TMME244	TIERAP	
50	TMME279	PCB SPACER	
51	TMXE049	BALLAST INSTALL METAL	
69	TPCC04402	CARTON	PT-AX100U
	TPCC04403	CARTON	PT-AX100E
70	TPDF1741	ACCESSORY CARTON	
71	TPDF1742	CUSHION	
72	TPDF1743	CUSHION	
73	TPDF1771	CUSHION 2	

Ref. No.	Part No.	Part Name & Description	Remarks
74	TPEH110-1	SET COVER	
	TQB817002-1	SAFETY SHEET	PT-AX100U
75	TQBJ0203	INSTRUCTION BOOK	⚠ PT-AX100U
	TQBJ0204	INSTRUCTION BOOK	⚠ PT-AX100E
	TQBJ7002-1	DIRECTORY SHEET	PT-AX100U
	TQD1712010	SHEET	
	TQDJ18012-2	GUARANTEE CARD(CANADA)	PT-AX100U
	TQDJ18026-2	GUARANTEE CARD(USA)	PT-AX100U
	TSXL586	FLEX CABLE(A8-S1)	⚠
52	TTPA0453	TERMINAL COVER ASSY	
	TUCB5061	POWERBOX INSULATION METAL	
	TUCB5062	FAN INSULATION METAL	
	TUCB5064	ALUMINUM SHEET 1	
	TUCB5065	ALUMINUM SHEET 2	
	TUCB5066	ALUMINUM SHEET 3	
	TUCB5077	ALUMINUM SHEET 4	
	TUCB5078	ALUMINUM SHEET 5	
	TUCB5079	ALUMINUM SHEET 6	
53	TUCX5181	GROUND METAL 1	
54	TUCX5222	VASE METAL	
55	TUCX5223	BOARD EARTH METAL	
56	TUWC055	INSTALL METAL(K-PCB)	
57	TUXX406	BALLAST INSTALL METAL	
29	TXAEE03VKD3	LAMP HOUSE ASSY	
23	TXAEE04VKD3	INHALATION DUCT ASSY	
58	TXFKF01QDZZ	BOTTOM COVER	PT-AX100U
	TXFKF01QEAZ	BOTTOM COVER	PT-AX100E
59	TXFKF02QDZZ	UPPER COVER	PT-AX100U
	TXFKF02QEAZ	UPPER COVER	PT-AX100E
60	TXFKK01VKD3	LAMP COVER ASSY	
61	TXFKN01VKD3	FILTER ASSY	
	TXJ/B1VKD3	LEAD WIRE (B1-P2)	⚠
	TXJ/E2VKD3	EARTH WIRE	⚠
	TXJ/E3VKD3	EARTH LEAD	⚠
	TXJ/E4VKD3	EARTH LEAD	⚠
	TXJ/H1VKD3	LEAD WIRE (H1-A23)	⚠
	TXJ/K1VKD3	LEAD WIRE (K1-PK)	⚠
	TXJ/L2VKD3	LEAD WIRE (B-PCB)	⚠
	TXJ/M1VKD3	LEAD WIRE(M1-A21)	⚠
	TXJ/P1VKD3	LEAD WIRE (PK-P1)	⚠
	TXJ/P3VKD3	LEAD WIRE (P3-A6)	⚠
	TXJ/Q3VKD3	LEAD WIRE (Q3-A4)	⚠
62	TXFEC99VKD3A	OPTICALBLOCK A	
	TXFEC99VKD3B	OPTICAL BLOCK B	
63	TXFEC98VKD3	ANALYSIS BLOCK	
64	TXZEC03VKD3	CINEMA FILTER ASSY	
65	TXZEN01VKD3	IRIS UNIT ASSY	
66	TXZKG03VKD3	LENS	
	XSB3+10FN	SCREW	
67	XSB3+8FN	SCREW	
	XSN3+8FJK	SCREW	
68	XTB3+12CFN	SCREW	
	XTBT969FJK	SCREW	
	XTN3+6GFJ	SCREW	
	XTW3+8PFJ	SCREW	
	XYN2+F6FJ	SCREW	
	XYN2+J4FJ	SCREW	
	XYN3+F12FJ	SCREW	
	XYN3+F30	SCREW	
	XYN3+F8FJ	SCREW	
	XYN3+J12FJ	SCREW	
	XYN3+J8FJ	SCREW	
	XYN4+E8FJ	SCREW	
	XYN4+F12FJ	SCREW	
	XYN4+J12FJ	SCREW	
	XZBT6532	POLY BAG	
[INTEGRATED CIRCUIT]			
IC1001	C1AB00002650	I.C	
IC1005	C1AB00002628	I.C	
IC1006	C3ABQJ000048	I.C	

Ref. No.	Part No.	Part Name & Description	Remarks
IC1007	C0ZBZ0001361	I.C	
IC1010	TVRP119	I.C	
IC1012	C3BBFC000321	I.C	
IC1013	C0CBCBD00008	I.C	
IC1016	C0EBE0000336	I.C	
IC1026	C0DBEKG00004	I.C	
IC1027	C0DBEYY00042	I.C	
IC1028	C0DBEKG00004	I.C	
IC1029	C0DBEKG00004	I.C	
IC1030	C1AB00002351	I.C	
IC1033	C0DBEFH00001	I.C	
IC1053	C1AB00002607	I.C	
IC1054	C1AB00002289	I.C	
IC1055	C1AB00002607	I.C	
IC1056	C1AB00002289	I.C	
IC1057	C1AB00002607	I.C	
IC1058	C1AB00002289	I.C	
IC1060	C0CBCYG00004	I.C	
IC1061	C3EBKC000014	I.C	
IC1063	TVRP120	I.C	
IC1066	C0CBCAG00016	I.C	
IC1102	C0JBAZ002431	I.C	
IC1103	C0ZBZ0001473	I.C	
IC1105	C0CBCDD00004	I.C	
IC1106	C3EBEC000054	I.C	
IC1107	C0GBG0000053	I.C	
IC1111	C0DBZGF00002	I.C	
IC1115	C0ABCA000085	I.C	
IC1116	C0EBE0000336	I.C	
IC1117	C1BB00000888	I.C	
IC1122	C0CBCAD00015	I.C	
IC1123	C0CBCAD00015	I.C	
IC1124	C0CBCAD00015	I.C	
IC1125	C0CBCDD00004	I.C	
IC1133	TVRP121	I.C	
IC1137	C0JBAA000359	I.C	
IC1138	C0JBAA000359	I.C	
IC9602	C0ZBZ0001462	I.C(B-PCB)	
IC9603	C0ZBZ0001462	I.C(B-PCB)	
[TRANSISTORS]			
Q1001	2SD1819A0L	TRANSISTOR	
Q1003	2SB1218A0L	TRANSISTOR	
Q1006	2SD1819A0L	TRANSISTOR	
Q1008	2SD1819A0L	TRANSISTOR	
Q1009	2SD1819A0L	TRANSISTOR	
Q1011	2SD1819A0L	TRANSISTOR	
Q1012	2SD1819A0L	TRANSISTOR	
Q1015	2SD1819A0L	TRANSISTOR	
Q1031	2SD1819A0L	TRANSISTOR	
Q1032	2SD1819A0L	TRANSISTOR	
Q1033	2SD1819A0L	TRANSISTOR	
Q1034	2SD1819A0L	TRANSISTOR	
Q1035	2SD1819A0L	TRANSISTOR	
Q1037	B1GBCFJJ0007	TRANSISTOR	
Q1111	2SD1819A0L	TRANSISTOR	
Q1112	B1GBCFJJ0007	TRANSISTOR	
Q1117	B1GBCFJJ0007	TRANSISTOR	
Q1120	2SB1218A0L	TRANSISTOR	
Q1121	2SD1819A0L	TRANSISTOR	
Q2001	B1GDCFJJ0008	TRANSISTOR	
Q2021	B1GBCFJJ0007	TRANSISTOR	
Q2022	B1GBCFJJ0007	TRANSISTOR	
Q2023	B1GDCFJJ0008	TRANSISTOR	
Q2024	B1GDCFJJ0008	TRANSISTOR	
Q9603	B1DEGQ000037	TRANSISTOR	
Q9604	2SB0710AWL	TRANSISTOR(B-PCB)	
Q9605	2SB0710AWL	TRANSISTOR(B-PCB)	
Q9606	B1DEGM000022	TRANSISTOR	
Q9607	B1DEGM000022	TRANSISTOR	
Q9608	2SB0710AWL	TRANSISTOR(B-PCB)	
Q9609	2SB0710AWL	TRANSISTOR(B-PCB)	

Ref. No.	Part No.	Part Name & Description	Remarks
Q9610	B1DEGM000022	TRANSISTOR	
Q9611	B1DEGM000022	TRANSISTOR	
Q9614	B1DEGQ000037	TRANSISTOR	
		[DIODES]	
D1010	MA8056M	DIODE	
D1011	MA8056M	DIODE	
D1024	B3AAB0000038	DIODE	
D1105	EZJZ0V171AA	VARISTOR	
D1110	EZJZ0V171AA	VARISTOR	
D1122	MA152WK	DIODE	
D1123	MA152WK	DIODE	
D1124	MA3X15300L	DIODE	
D1125	MA704A	DIODE	
D1126	B0JCPD000026	DIODE	
D1127	B0JCPD000026	DIODE	
D1139	EZAEG2A50AX	DIODE	
D1141	EZAEG2A50AX	DIODE	
D1142	EZAEG2A50AX	DIODE	
D1143	EZAEG2A50AX	DIODE	
D1145	EZAEG2A50AX	DIODE	
D1146	EZAEG2A50AX	DIODE	
D1147	EZAEG2A50AX	DIODE	
D1148	EZAEG2A50AX	DIODE	
D2021	B3AAB0000038	DIODE	
D2022	B3AAB0000038	DIODE	
D2023	B3AGB0000044	DIODE	
D9101	ERZV10D471	VARISTOR	⚠
D9601	B0FABR000008	DIODE(B-PCB)	
D9604	MA158TX	DIODE(B-PCB)	MA3X15800L
D9605	B0JCPF000001	DIODE(B-PCB)	
D9606	MA158TX	DIODE(B-PCB)	MA3X15800L
D9607	B0JCPF000001	DIODE(B-PCB)	
D9608	MA158TX	DIODE(B-PCB)	MA3X15800L
D9609	B0JCPF000001	DIODE(B-PCB)	
D9611	MA158TX	DIODE(B-PCB)	MA3X15800L
D9612	B0JCPF000001	DIODE(B-PCB)	
D9616	B0ECHP000003	DIODE(B-PCB)	
D9617	B0JCPF000001	DIODE(B-PCB)	
D9618	B0JCPF000001	DIODE(B-PCB)	
D9619	B0JCPF000001	DIODE(B-PCB)	
D9620	B0JCPF000001	DIODE(B-PCB)	
D9621	B0JCPF000001	DIODE(B-PCB)	
D9622	B0ECHP000003	DIODE(B-PCB)	
D9623	B0ECHP000003	DIODE(B-PCB)	
D9624	B0JCPF000001	DIODE(B-PCB)	
D9625	B0JCPF000001	DIODE(B-PCB)	
D9626	B0JCPF000001	DIODE(B-PCB)	
D9627	B0JCPF000001	DIODE(B-PCB)	
D9628	B0JCPF000001	DIODE(B-PCB)	
D9629	B0ECHP000003	DIODE(B-PCB)	
		[COILS]	
L1002	J0JCC0000168	FILTER	
L1005	J0JCC0000168	FILTER	
L1012	J0JCC0000168	FILTER	
L1013	J0JCC0000168	FILTER	
L1014	J0JCC0000168	FILTER	
L1015	J0JCC0000168	FILTER	
L1017	J0JCC0000168	FILTER	
L1018	J0JCC0000168	FILTER	
L1019	J0JCC0000168	FILTER	
L1020	J0JCC0000168	FILTER	
L1021	J0JHC0000078	EMI FILTER	
L1022	J0JHC0000078	EMI FILTER	
L1023	J0JHC0000078	EMI FILTER	
L1024	J0JHC0000078	EMI FILTER	
L1025	J0JCC0000168	FILTER	
L1026	J0JHC0000078	EMI FILTER	
L1027	J0JHC0000078	EMI FILTER	
L1028	J0JHC0000078	EMI FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
L1029	J0JHC0000078	EMI FILTER	
L1030	J0JJC0000022	EMI FILTER	
L1033	J0JCC0000168	FILTER	
L1034	J0JJC0000022	EMI FILTER	
L1035	ELJFA470JFB	COIL	
L1043	J0JCC0000168	FILTER	
L1049	J0JJC0000022	EMI FILTER	
L1050	J0JJC0000022	EMI FILTER	
L1051	J0JJC0000022	EMI FILTER	
L1064	J0JJC0000022	EMI FILTER	
L1065	J0JCC0000168	FILTER	
L1070	J0JJC0000022	EMI FILTER	
L1071	J0JJC0000022	EMI FILTER	
L1072	J0JJC0000022	EMI FILTER	
L1076	ELJFA470JFB	COIL	
L1077	J0JJC0000022	EMI FILTER	
L1078	J0JHC0000078	EMI FILTER	
L1079	J0JCC0000168	FILTER	
L1080	J0JCC0000168	FILTER	
L1083	J0JHC0000078	EMI FILTER	
L1103	J0JCC0000168	FILTER	
L1104	J0JJC0000022	EMI FILTER	
L1105	J0JJC0000022	EMI FILTER	
L1106	J0JJC0000022	EMI FILTER	
L1117	J0JJC0000022	EMI FILTER	
L1118	J0JHC0000078	EMI FILTER	
L1119	J0JHC0000078	EMI FILTER	
L1120	J0JHC0000078	EMI FILTER	
L1121	J0JHC0000078	EMI FILTER	
L1122	J0JHC0000078	EMI FILTER	
L1124	J0JCC0000168	FILTER	
L1126	G1C330MA0077	COIL	
L1127	G1C330MA0077	COIL	
L1129	J0JJC0000022	EMI FILTER	
L1130	J0JJC0000022	EMI FILTER	
L1131	J0JJC0000022	EMI FILTER	
L1137	J0JJC0000022	EMI FILTER	
L1138	J0JJC0000022	EMI FILTER	
L1139	J0JJC0000022	EMI FILTER	
L1140	J0JJC0000022	EMI FILTER	
L1141	J0JJC0000022	EMI FILTER	
L1145	J0JJC0000022	EMI FILTER	
L2001	J0JCC0000168	FILTER	
LF9101	WW-G0B-G0006	CHOKE COIL	⚠
LF9102	WW-G0B-G0006	CHOKE COIL	⚠
FL1001	J0HABC000011	FILTER	
FL1002	J0HABC000011	FILTER	
FL1003	J0HABC000011	FILTER	
FL1004	J0HAYY000012	FILTER	
FL1005	J0HAYY000012	FILTER	
FL1006	J0HAYY000012	FILTER	
FL1007	J0HAYY000012	FILTER	
FL1008	J0HAYY000012	FILTER	
FL1009	J0HAYY000012	FILTER	
FL1010	J0HAYY000012	FILTER	
		[RESISTORS]	
R1001	ERJ2GEJ220	M 22 OHM, 0.063W	
R1002	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1003	ERJ2GEJ220	M 22 OHM, 0.063W	
R1005	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1006	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1007	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1008	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1009	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1010	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1011	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1012	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1013	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1014	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1015	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1016	ERJ3GEYJ102	M 1K OHM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1017	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1018	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1019	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1020	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1021	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1022	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1023	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1026	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1027	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1029	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1030	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1031	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1032	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1033	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1034	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1035	ERJ2GEJ103	M 10K OHM, 0.063W	
R1036	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1038	ERJ2GEJ103	M 10K OHM, 0.063W	
R1039	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1040	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1041	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1042	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1043	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1045	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1046	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1049	ERJ2GEJ682	RESISTOR	
R1050	ERJ2GEJ103	M 10K OHM, 0.063W	
R1051	ERJ2GEJ332	M 3.3KOHM, 0.063W	
R1053	ERJ2GEJ473	M 47K OHM, 0.063W	
R1055	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1058	ERJ2GEJ101	M 100 OHM, 0.063W	
R1059	ERJ2GEJ101	M 100 OHM, 0.063W	
R1061	ERJ2GEJ101	M 100 OHM, 0.063W	
R1062	ERJ2GEJ331	M 330 OHM, 0.063W	
R1063	ERJ3EKF4990	RESISTOR	
R1065	ERJ2GEJ331	M 330 OHM, 0.063W	
R1066	EXB28V560J	RESISTOR ARRAY	
R1067	EXB28V560J	RESISTOR ARRAY	
R1068	EXB28V560J	RESISTOR ARRAY	
R1069	EXB28V560J	RESISTOR ARRAY	
R1070	EXB28V560J	RESISTOR ARRAY	
R1071	ERJ2GEJ101	M 100 OHM, 0.063W	
R1072	ERJ3EKF1600	RESISTOR	
R1073	EXB28V560J	RESISTOR ARRAY	
R1074	EXB28V560J	RESISTOR ARRAY	
R1075	EXB28V560J	RESISTOR ARRAY	
R1076	EXB28V560J	RESISTOR ARRAY	
R1077	EXB28V560J	RESISTOR ARRAY	
R1078	EXB28V560J	RESISTOR ARRAY	
R1079	EXB28V560J	RESISTOR ARRAY	
R1080	EXB28V560J	RESISTOR ARRAY	
R1081	EXB28V560J	RESISTOR ARRAY	
R1082	EXB28V560J	RESISTOR ARRAY	
R1083	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1084	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1085	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1086	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1087	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1088	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1089	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1090	ERJ2GEJ560	M 56 OHM, 0.063W	
R1091	ERJ2GEJ220	M 22 OHM, 0.063W	
R1092	ERJ2GEJ220	M 22 OHM, 0.063W	
R1093	ERJ2GEJ220	M 22 OHM, 0.063W	
R1094	ERJ2GEJ220	M 22 OHM, 0.063W	
R1095	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1096	ERJ2GEJ220	M 22 OHM, 0.063W	
R1097	ERJ2GEJ220	M 22 OHM, 0.063W	
R1098	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1099	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1100	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1101	ERJ2GEJ220	M 22 OHM, 0.063W	
R1102	ERJ3EKF1371	M 1.37KOHM,0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1103	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1104	ERJ2GEJ220	M 22 OHM, 0.063W	
R1105	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1106	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1107	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1108	D1HG2208A002	RESISTOR	
R1109	ERJ2GE0R00	M 0 OHM, 0.063W	
R1110	ERJ2GEJ220	M 22 OHM, 0.063W	
R1111	ERJ3EKF1691	M1.69KOHM, 1/16W	
R1112	ERJ2GEJ220	M 22 OHM, 0.063W	
R1113	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1114	ERJ2GEJ220	M 22 OHM, 0.063W	
R1115	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1116	D1HG2208A002	RESISTOR	
R1117	ERJ2GEJ220	M 22 OHM, 0.063W	
R1118	ERJ3EKF1501	M 1.5KOHM, 1/16W	
R1119	ERJ2GEJ220	M 22 OHM, 0.063W	
R1120	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1121	ERJ2GEJ560	M 56 OHM, 0.063W	
R1122	ERJ3GEYJ333	M 33KOHM, 1/16W	
R1124	ERJ2GE0R00	M 0 OHM, 0.063W	
R1125	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1126	ERJ2GEJ220	M 22 OHM, 0.063W	
R1128	ERJ2GE0R00	M 0 OHM, 0.063W	
R1129	ERJ2GEJ220	M 22 OHM, 0.063W	
R1130	ERJ2GEJ220	M 22 OHM, 0.063W	
R1132	ERJ2GE0R00	M 0 OHM, 0.063W	
R1134	ERJ2GEJ220	M 22 OHM, 0.063W	
R1135	ERJ2GEJ220	M 22 OHM, 0.063W	
R1136	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1137	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1138	EXB28V220J	RESISTOR ARRAY	
R1139	EXB28V220J	RESISTOR ARRAY	
R1140	ERJ2GE0R00	M 0 OHM, 0.063W	
R1141	EXB28V220J	RESISTOR ARRAY	
R1142	ERJ2GEJ103	M 10K OHM, 0.063W	
R1143	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1144	ERJ2GEJ221	M 220 OHM, 0.063W	
R1149	ERJ2GEJ103	M 10K OHM, 0.063W	
R1150	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1152	ERJ2GEJ103	M 10K OHM, 0.063W	
R1154	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1156	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1157	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1158	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1159	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1160	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1161	ERJ3GEYJ333	M 33KOHM, 1/16W	
R1162	ERJ2GE0R00	M 0 OHM, 0.063W	
R1164	ERJ3GEYJ333	M 33KOHM, 1/16W	
R1168	ERJ2GE0R00	M 0 OHM, 0.063W	
R1169	ERJ2GE0R00	M 0 OHM, 0.063W	
R1170	ERJ2GEJ220	M 22 OHM, 0.063W	
R1171	ERJ2GEJ220	M 22 OHM, 0.063W	
R1172	ERJ2GEJ220	M 22 OHM, 0.063W	
R1173	ERJ2GEJ220	M 22 OHM, 0.063W	
R1174	ERJ2GEJ220	M 22 OHM, 0.063W	
R1175	ERJ2GEJ220	M 22 OHM, 0.063W	
R1176	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1177	ERJ2GEJ103	M 10K OHM, 0.063W	
R1178	ERJ2GEJ103	M 10K OHM, 0.063W	
R1179	ERJ2GE0R00	M 0 OHM, 0.063W	
R1180	ERJ2GE0R00	M 0 OHM, 0.063W	
R1181	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1182	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1184	ERJ3EKF2201	RESISTOR	
R1185	ERJ2GEJ103	M 10K OHM, 0.063W	
R1186	ERJ2GEJ103	M 10K OHM, 0.063W	
R1188	ERJ2GE0R00	M 0 OHM, 0.063W	
R1189	ERJ3EKF1072	RESISTOR	
R1190	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1191	ERJ2GE0R00	M 0 OHM, 0.063W	
R1192	ERJ2GE0R00	M 0 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1193	ERJ2GEJ220	M 22 OHM, 0.063W	
R1194	ERJ2GEJ220	M 22 OHM, 0.063W	
R1198	ERJ2GEJ220	M 22 OHM, 0.063W	
R1199	ERJ2GEJ560	M 56 OHM, 0.063W	
R1200	ERJ2GEJ560	M 56 OHM, 0.063W	
R1201	ERJ2GE0R00	M 0 OHM, 0.063W	
R1202	ERJ2GEJ223	RESISTOR	
R1206	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1207	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1208	EXB28V560J	RESISTOR ARRAY	
R1209	EXB28V560J	RESISTOR ARRAY	
R1210	EXB28V560J	RESISTOR ARRAY	
R1211	EXB28V560J	RESISTOR ARRAY	
R1212	EXB28V560J	RESISTOR ARRAY	
R1213	EXB28V560J	RESISTOR ARRAY	
R1214	EXB28V560J	RESISTOR ARRAY	
R1215	EXB28V560J	RESISTOR ARRAY	
R1216	EXB28V560J	RESISTOR ARRAY	
R1217	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1218	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1219	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1220	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1221	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1222	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1223	ERJ2GEJ560	M 56 OHM, 0.063W	
R1227	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R1228	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R1229	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R1233	ERJ2GEJ220	M 22 OHM, 0.063W	
R1236	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1239	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1240	EXB28V102J	RESISTOR ARRAY	
R1257	ERJ2GEJ560	M 56 OHM, 0.063W	
R1258	ERJ2GEJ220	M 22 OHM, 0.063W	
R1259	ERJ2GEJ681	M 680 OHM, 0.063W	
R1260	ERJ2GEJ220	M 22 OHM, 0.063W	
R1261	ERJ2GEJ681	M 680 OHM, 0.063W	
R1262	ERJ2GEJ681	M 680 OHM, 0.063W	
R1265	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1267	ERJ2GEJ220	M 22 OHM, 0.063W	
R1268	ERJ2GEJ220	M 22 OHM, 0.063W	
R1269	ERJ2GEJ220	M 22 OHM, 0.063W	
R1270	ERJ2GEJ220	M 22 OHM, 0.063W	
R1271	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1272	ERJ2GEJ220	M 22 OHM, 0.063W	
R1273	ERJ2GEJ220	M 22 OHM, 0.063W	
R1274	ERJ2GEJ220	M 22 OHM, 0.063W	
R1275	ERJ2GEJ103	M 10K OHM, 0.063W	
R1276	EXB28V560J	RESISTOR ARRAY	
R1277	ERJ2GEJ220	M 22 OHM, 0.063W	
R1278	ERJ2GEJ220	M 22 OHM, 0.063W	
R1279	EXB28V560J	RESISTOR ARRAY	
R1280	EXB28V560J	RESISTOR ARRAY	
R1281	EXB28V560J	RESISTOR ARRAY	
R1282	EXB28V560J	RESISTOR ARRAY	
R1283	EXB28V560J	RESISTOR ARRAY	
R1284	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1285	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1286	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1287	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1288	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1289	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1290	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1291	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1292	ERJ2GEJ3R0	M 3 OHM, 0.063W	
R1294	ERJ2GEJ103	M 10K OHM, 0.063W	
R1297	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1298	EXB28V220J	RESISTOR ARRAY	
R1301	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1302	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1303	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1304	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1305	ERJ3GEYJ105	M 1M OHM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1306	EXB28V220J	RESISTOR ARRAY	
R1307	ERJ3EKF1002	M 10KOHM, 1/16W	
R1308	ERJ3EKF1002	M 10KOHM, 1/16W	
R1309	ERJ3EKF1691	M1.69KOHM, 1/16W	
R1310	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1314	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1315	EXB28V102J	RESISTOR ARRAY	
R1317	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1318	ERJ2GEJ220	M 22 OHM, 0.063W	
R1326	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1334	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1347	ERJ2GEJ103	M 10K OHM, 0.063W	
R1348	ERJ2GEJ101	M 100 OHM, 0.063W	
R1353	EXB28V560J	RESISTOR ARRAY	
R1354	EXB28V560J	RESISTOR ARRAY	
R1355	ERJ2GEJ103	M 10K OHM, 0.063W	
R1363	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1364	ERJ2GEJ103	M 10K OHM, 0.063W	
R1365	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1367	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1370	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1371	ERJ2GEJ103	M 10K OHM, 0.063W	
R1372	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1373	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1374	EXB28V560J	RESISTOR ARRAY	
R1375	ERJ6GEYJ560	M 56 OHM,J,1/10W	
R1381	ERJ3EKF2202	RESISTOR	
R1382	EXB28V560J	RESISTOR ARRAY	
R1383	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1384	EXB28V560J	RESISTOR ARRAY	
R1389	ERJ2GEJ333	M 33K OHM, 0.063W	
R1402	ERJ2GEJ101	M 100 OHM, 0.063W	
R1414	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1415	ERJ3EKF5101	RESISTOR	
R1416	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1417	ERJ3EKF2202	RESISTOR	
R1419	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	
R1444	ERJ2GEJ103	M 10K OHM, 0.063W	
R1445	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1472	ERJ2GEJ220	RESISTOR	
R1505	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1506	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1507	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1508	ERJ2GE0R00	M 0 OHM, 0.063W	
R1512	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1513	ERJ3GEYJ273	M 27KOHM, 1/16W	
R1516	EXB28V390J	RESISTOR NETWORK	
R1517	EXB28V390J	RESISTOR NETWORK	
R1518	EXB28V390J	RESISTOR NETWORK	
R1519	ERJ3GEYJ151	M 150 OHM,J,1/16W	
R1520	EXB28V390J	RESISTOR NETWORK	
R1521	EXB28V390J	RESISTOR NETWORK	
R1522	EXB28V390J	RESISTOR NETWORK	
R1523	EXB28V390J	RESISTOR NETWORK	
R1524	EXB28V390J	RESISTOR NETWORK	
R1525	EXB28V390J	RESISTOR NETWORK	
R1526	EXB28V390J	RESISTOR NETWORK	
R1527	EXB28V390J	RESISTOR NETWORK	
R1528	EXB28V390J	RESISTOR NETWORK	
R1530	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1531	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1532	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1533	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1534	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1535	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1536	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1537	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1538	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1539	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1540	ERJ3GEYJ390	METAL OXIDE RESISTOR	
R1575	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1576	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1592	ERJ2GEJ103	M 10K OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1600	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R1604	EXB38V680J	RESISTOR NETWORK	
R1606	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1608	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1610	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1611	ERJ3GEYJ123	M 12K OHM,J,1/16W	
R1612	EXB38V680J	RESISTOR NETWORK	
R1614	EXB38V680J	RESISTOR NETWORK	
R1616	EXB38V680J	RESISTOR NETWORK	
R1617	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1618	EXB38V680J	RESISTOR NETWORK	
R1619	EXB28V390J	RESISTOR NETWORK	
R1620	EXB38V680J	RESISTOR NETWORK	
R1622	EXB38V680J	RESISTOR NETWORK	
R1624	ERJ3EKF5903	M 590KOHM, 1/16W	
R1626	EXB38V680J	RESISTOR NETWORK	
R1628	EXB38V680J	RESISTOR NETWORK	
R1629	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1630	EXB38V680J	RESISTOR NETWORK	
R1632	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1633	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1634	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1635	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1636	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1637	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1638	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1639	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1640	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1641	ERJ3EKF5621	M5.62KOHM, 1/16W	
R1642	ERJ3EKF5621	M5.62KOHM, 1/16W	
R1643	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1644	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1645	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1646	ERJ3GEYJ124	M 120KOHM,J,1/16W	
R1647	ERJ2GE0R00	M 0 OHM, 0.063W	
R1648	ERJ2GE0R00	M 0 OHM, 0.063W	
R1650	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1652	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1653	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1654	ERJ3EKF3923	M 392KOHM, 1/16W	
R1655	ERJ3EKF3923	M 392KOHM, 1/16W	
R1656	ERJ3EKF1803	M 180KOHM, 0.063W	
R1657	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1658	ERJ3GEYJ105	M 1M OHM,J,1/16W	
R1661	ERJ2GEJ103	M 10K OHM, 0.063W	
R1662	ERJ2GEJ103	M 10K OHM, 0.063W	
R1667	ERJ3GEYJ510	M 51 OHM,J,1/16W	
R1668	ERJ3GEYJ510	M 51 OHM,J,1/16W	
R1671	ERJ3GEYJ391	M 390 OHM,J,1/16W	
R1673	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1674	ERJ2GE0R00	M 0 OHM, 0.063W	
R1675	ERJ2GE0R00	M 0 OHM, 0.063W	
R1676	ERJ2GE0R00	M 0 OHM, 0.063W	
R1677	ERJ2GE0R00	M 0 OHM, 0.063W	
R1678	ERJ2GE0R00	M 0 OHM, 0.063W	
R1679	ERJ2GE0R00	M 0 OHM, 0.063W	
R1680	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1681	ERJ2GE0R00	M 0 OHM, 0.063W	
R1706	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1720	ERJ2GEJ103	M 10K OHM, 0.063W	
R1721	EXB38V680J	RESISTOR NETWORK	
R1722	EXB38V680J	RESISTOR NETWORK	
R1723	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1724	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1725	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1726	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1727	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R1728	ERJ3GEYJ680	M 68 OHM,J,1/16W	
R2001	ERJ3EKF5601	M 5.6KOHM, 1/16W	
R2002	ERJ3EKF1871V	RESISTOR	
R2003	ERJ3EKF3741	RESISTOR	
R2004	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R2005	ERJ3EKF1132	RESISTOR	
R2006	ERJ3EKF5601	M 5.6KOHM, 1/16W	
R2007	ERJ3EKF1871V	RESISTOR	
R2008	ERJ3EKF3741	RESISTOR	
R2009	ERJ3EKF1132	RESISTOR	
R2010	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R2011	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R2012	ERJ3GEY0R00	M 0 OHM, 1/16W	
R2013	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R2014	EXB28VR000	RESISTOR ARRAY	
R2021	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R2022	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R2023	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R2024	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R2025	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2026	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2027	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2028	ERJ3GEYJ182	M 1.8KOHM,J,1/16W	
R2029	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R2030	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R2201	EXB38V220J	RESISTOR ARRAY	
R9101	D0AE106JA179	RESISTOR	⚠
R9102	D0A1825JA015	RESISTOR	⚠
R9601	ERX2SJR47E	M 0.47OHM,J, 2W	
R9630	ERJ14YJ3R3U	M 3.3 OHM,J, 1/4W	
R9631	ERJ8GEYJ220	M 68 OHM, J,1/4W	
R9632	ERJ14YJ5R6U	M 5.6 OHM,J, 1/4W	
R9633	ERJ8GEYJ100	M 10 OHM, J,1/4W	
R9634	ERJ8GEYJ120	RESISTOR(B-PCB)	
R9636	ERJ14YJ3R3U	M 3.3 OHM,J, 1/4W	
R9637	ERJ8GEYJ220	M 68 OHM, J,1/4W	
R9638	ERJ14YJ5R6U	M 5.6 OHM,J, 1/4W	
R9639	ERJ8GEYJ100	M 10 OHM, J,1/4W	
R9640	ERJ8GEYJ120	RESISTOR(B-PCB)	
R9653	D0XGR22J0004	RESISTOR(B-PCB)	
		[CAPACITORS]	
C1001	F2G0J3300014	CAPACITOR	
C1002	EEEHB1A101P	CAPACITOR	
C1003	ECJ0EB1C103K	C 0.01UF, 16V	
C1004	F2G0J3300014	CAPACITOR	
C1005	ECJ0EB1C103K	C 0.01UF, 16V	
C1006	F2G0J3300014	CAPACITOR	
C1007	ECJ0EF1C104Z	C 0.1UF, 16V	
C1008	ECJ0EB1C103K	C 0.01UF, 16V	
C1009	F2G0J3300014	CAPACITOR	
C1010	ECJ0EB1C103K	C 0.01UF, 16V	
C1011	ECJ0EB1C103K	C 0.01UF, 16V	
C1012	ECJ0EB1H102K	C 1000PF, 50V	
C1013	ECJ0EB1H102K	C 1000PF, 50V	
C1014	F2G0J3300014	CAPACITOR	
C1015	ECJ0EF1C104Z	C 0.1UF, 16V	
C1016	ECJ0EF1C104Z	C 0.1UF, 16V	
C1017	ECJ0EF1C104Z	C 0.1UF, 16V	
C1018	ECJ0EF1C104Z	C 0.1UF, 16V	
C1019	ECJ0EF1C104Z	C 0.1UF, 16V	
C1020	ECJ0EF1C104Z	C 0.1UF, 16V	
C1021	ECJ0EF1C104Z	C 0.1UF, 16V	
C1022	ECJ1VF1A225Z	CAPACITOR	
C1023	ECJ1VF1A225Z	CAPACITOR	
C1024	ECJ0EF1C104Z	C 0.1UF, 16V	
C1027	ECJ0EF1C104Z	C 0.1UF, 16V	
C1028	ECJ0EF1C104Z	C 0.1UF, 16V	
C1029	ECJ0EF1C104Z	C 0.1UF, 16V	
C1030	ECJ0EF1C104Z	C 0.1UF, 16V	
C1032	ECJ0EF1C104Z	C 0.1UF, 16V	
C1033	ECJ1VB1C393K	CAPACITOR	
C1034	ECJ2FF1A106Z	C 10UF, 10V	
C1035	ECJ0EF1C104Z	C 0.1UF, 16V	
C1036	ECJ0EF1C104Z	C 0.1UF, 16V	
C1037	ECJ0EB1C103K	C 0.01UF, 16V	
C1038	ECJ0EB1C103K	C 0.01UF, 16V	
C1039	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1040	ECJ0EF1C104Z	C 0.1UF, 16V	
C1041	ECJ0EF1C104Z	C 0.1UF, 16V	
C1042	ECJ0EF1C104Z	C 0.1UF, 16V	
C1043	ECJ0EF1C104Z	C 0.1UF, 16V	
C1044	ECJ1VB0J824K	CAPACITOR	
C1045	ECJ0EF1C104Z	C 0.1UF, 16V	
C1046	ECJ0EF1C104Z	C 0.1UF, 16V	
C1047	ECJ0EF1C104Z	C 0.1UF, 16V	
C1048	ECJ0EF1C104Z	C 0.1UF, 16V	
C1049	ECJ0EF1C104Z	C 0.1UF, 16V	
C1050	ECJ0EF1C104Z	C 0.1UF, 16V	
C1051	ECJ0EF1C104Z	C 0.1UF, 16V	
C1052	ECJ0EF1C104Z	C 0.1UF, 16V	
C1053	ECJ0EF1C104Z	C 0.1UF, 16V	
C1054	ECJ0EF1C104Z	C 0.1UF, 16V	
C1055	ECJ0EF1C104Z	C 0.1UF, 16V	
C1056	ECJ0EF1C104Z	C 0.1UF, 16V	
C1057	ECJ0EF1C104Z	C 0.1UF, 16V	
C1058	ECJ2FF1A106Z	C 10UF, 10V	
C1059	ECJ2FF1A106Z	C 10UF, 10V	
C1061	ECJ0EF1C104Z	C 0.1UF, 16V	
C1062	ECJ2FF1A106Z	C 10UF, 10V	
C1063	ECJ0EB1H102K	C 1000PF, 50V	
C1064	ECJ2FF1A106Z	C 10UF, 10V	
C1065	ECJ0EF1C104Z	C 0.1UF, 16V	
C1066	ECJ0EF1C104Z	C 0.1UF, 16V	
C1067	ECJ0EF1C104Z	C 0.1UF, 16V	
C1068	ECJ0EF1C104Z	C 0.1UF, 16V	
C1069	ECJ0EF1C104Z	C 0.1UF, 16V	
C1070	ECJ0EF1C104Z	C 0.1UF, 16V	
C1071	ECJ0EB1C103K	C 0.01UF, 16V	
C1072	ECJ1VB1C823K	C 0.82UF, 16V	
C1073	ECJ2FF1A106Z	C 10UF, 10V	
C1074	ECJ1VB1C823K	C 0.82UF, 16V	
C1075	ECJ0EB1C103K	C 0.01UF, 16V	
C1076	ECJ0EB1H102K	C 1000PF, 50V	
C1079	ECJ0EF1C104Z	C 0.1UF, 16V	
C1081	ECJ0EF1C104Z	C 0.1UF, 16V	
C1082	ECJ0EB1H102K	C 1000PF, 50V	
C1083	EEEHB0G101R	E 100UF, 4V	
C1084	F2G1C2200010	CAPACITOR	
C1086	ECJ0EB1C822K	CAPACITOR	
C1090	ECJ0EF1C104Z	C 0.1UF, 16V	
C1098	ECJ2FF1A106Z	C 10UF, 10V	
C1101	ECJ0EF1C104Z	C 0.1UF, 16V	
C1103	F2G1C2200010	CAPACITOR	
C1104	ECJ1VF1E105Z	CAPACITOR	
C1105	EEEHB0G101R	E 100UF, 4V	
C1106	ECJ2FF1A106Z	C 10UF, 10V	
C1107	ECJ2FF1A106Z	C 10UF, 10V	
C1110	ECJ0EF1C104Z	C 0.1UF, 16V	
C1111	ECJ0EF1C104Z	C 0.1UF, 16V	
C1113	ECJ0EF1C104Z	C 0.1UF, 16V	
C1115	F2G1C2200010	CAPACITOR	
C1116	ECJ0EF1C104Z	C 0.1UF, 16V	
C1118	ECJ0EF1C104Z	C 0.1UF, 16V	
C1119	ECJ1VC1H331J	CAPACITOR	
C1120	ECJ0EF1C104Z	C 0.1UF, 16V	
C1121	ECJ0EF1C104Z	C 0.1UF, 16V	
C1123	ECJ1VF1E105Z	CAPACITOR	
C1124	ECJ0EF1C104Z	C 0.1UF, 16V	
C1125	ECJ0EF1C104Z	C 0.1UF, 16V	
C1126	ECJ0EF1C104Z	C 0.1UF, 16V	
C1127	ECJ0EF1C104Z	C 0.1UF, 16V	
C1128	ECJ0EF1C104Z	C 0.1UF, 16V	
C1129	ECJ0EF1C104Z	C 0.1UF, 16V	
C1130	ECJ0EF1C104Z	C 0.1UF, 16V	
C1133	ECJ1VF1E105Z	CAPACITOR	
C1134	ECJ0EF1C104Z	C 0.1UF, 16V	
C1135	ECJ0EF1C104Z	C 0.1UF, 16V	
C1139	ECJ0EB1H102K	C 1000PF, 50V	
C1141	ECJ1VF1A225Z	CAPACITOR	
C1143	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1144	ECJ1VC1H100C	C 10PF, 50V	
C1145	ECJ1VC1H100C	C 10PF, 50V	
C1146	EEEHB0G101R	E 100UF, 4V	
C1148	ECJ0EF1C104Z	C 0.1UF, 16V	
C1149	ECJ0EF1C104Z	C 0.1UF, 16V	
C1152	ECJ0EB1H102K	C 1000PF, 50V	
C1153	ECJ0EF1C104Z	C 0.1UF, 16V	
C1154	ECJ0EF1C104Z	C 0.1UF, 16V	
C1159	ECJ0EF1C104Z	C 0.1UF, 16V	
C1160	ECJ0EF1C104Z	C 0.1UF, 16V	
C1161	ECJ0EF1C104Z	C 0.1UF, 16V	
C1162	ECJ0EF1C104Z	C 0.1UF, 16V	
C1163	ECJ0EF1C104Z	C 0.1UF, 16V	
C1164	ECJ0EF1C104Z	C 0.1UF, 16V	
C1165	ECJ0EF1C104Z	C 0.1UF, 16V	
C1166	ECJ0EF1C104Z	C 0.1UF, 16V	
C1167	ECJ0EF1C104Z	C 0.1UF, 16V	
C1168	ECJ0EF1C104Z	C 0.1UF, 16V	
C1169	ECJ0EF1C104Z	C 0.1UF, 16V	
C1170	ECJ0EF1C104Z	C 0.1UF, 16V	
C1171	ECJ0EB1H102K	C 1000PF, 50V	
C1172	ECJ0EB1H102K	C 1000PF, 50V	
C1173	ECJ0EB1H102K	C 1000PF, 50V	
C1176	ECJ0EF1C104Z	C 0.1UF, 16V	
C1177	ECJ0EF1C104Z	C 0.1UF, 16V	
C1178	ECJ0EF1C104Z	C 0.1UF, 16V	
C1179	ECJ0EF1C104Z	C 0.1UF, 16V	
C1180	ECJ0EF1C104Z	C 0.1UF, 16V	
C1181	ECJ0EF1C104Z	C 0.1UF, 16V	
C1186	ECJ0EF1C104Z	C 0.1UF, 16V	
C1187	ECJ0EF1C104Z	C 0.1UF, 16V	
C1188	F2G0J4700010	CAPACITOR	
C1189	ECJ1VF1A225Z	CAPACITOR	
C1190	F2G0J4700010	CAPACITOR	
C1191	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1192	ECJ0EF1C104Z	C 0.1UF, 16V	
C1193	ECJ0EB1H102K	C 1000PF, 50V	
C1194	ECJ1VF1A225Z	CAPACITOR	
C1196	ECJ0EF1C104Z	C 0.1UF, 16V	
C1197	ECJ2FF1A106Z	C 10UF, 10V	
C1198	ECJ0EF1C104Z	C 0.1UF, 16V	
C1199	ECJ0EB1H102K	C 1000PF, 50V	
C1200	ECJ0EF1C104Z	C 0.1UF, 16V	
C1201	ECJ0EF1C104Z	C 0.1UF, 16V	
C1202	ECJ0EF1C104Z	C 0.1UF, 16V	
C1203	ECJ0EF1C104Z	C 0.1UF, 16V	
C1204	ECJ0EF1C104Z	C 0.1UF, 16V	
C1205	ECJ0EF1C104Z	C 0.1UF, 16V	
C1206	ECJ0EF1C104Z	C 0.1UF, 16V	
C1207	ECJ0EF1C104Z	C 0.1UF, 16V	
C1209	ECJ0EF1C104Z	C 0.1UF, 16V	
C1210	ECJ0EF1C104Z	C 0.1UF, 16V	
C1211	ECJ0EF1C104Z	C 0.1UF, 16V	
C1212	ECJ0EF1C104Z	C 0.1UF, 16V	
C1213	ECJ0EF1C104Z	C 0.1UF, 16V	
C1214	ECJ0EF1C104Z	C 0.1UF, 16V	
C1215	ECJ0EF1C104Z	C 0.1UF, 16V	
C1216	ECJ0EF1C104Z	C 0.1UF, 16V	
C1217	ECJ0EF1C104Z	C 0.1UF, 16V	
C1219	ECJ0EF1C104Z	C 0.1UF, 16V	
C1220	ECJ0EF1C104Z	C 0.1UF, 16V	
C1221	ECJ0EF1C104Z	C 0.1UF, 16V	
C1223	ECJ2FF1A106Z	C 10UF, 10V	
C1232	ECJ0EF1C104Z	C 0.1UF, 16V	
C1237	ECJ0EF1C104Z	C 0.1UF, 16V	
C1238	ECJ0EF1C104Z	C 0.1UF, 16V	
C1239	ECJ0EF1C104Z	C 0.1UF, 16V	
C1243	ECJ0EF1C104Z	C 0.1UF, 16V	
C1245	ECJ0EF1C104Z	C 0.1UF, 16V	
C1247	ECJ1VC1H100C	C 10PF, 50V	
C1251	ECJ0EF1C104Z	C 0.1UF, 16V	
C1252	ECJ0EF1C104Z	C 0.1UF, 16V	
C1253	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1254	ECJ0EF1C104Z	C 0.1UF, 16V	
C1255	ECJ0EF1C104Z	C 0.1UF, 16V	
C1256	ECJ0EF1C104Z	C 0.1UF, 16V	
C1257	ECJ0EF1C104Z	C 0.1UF, 16V	
C1258	ECJ0EF1C104Z	C 0.1UF, 16V	
C1259	ECJ0EF1C104Z	C 0.1UF, 16V	
C1260	ECJ0EF1C104Z	C 0.1UF, 16V	
C1261	ECJ0EF1C104Z	C 0.1UF, 16V	
C1262	ECJ0EF1C104Z	C 0.1UF, 16V	
C1263	ECJ0EF1C104Z	C 0.1UF, 16V	
C1264	ECJ0EF1C104Z	C 0.1UF, 16V	
C1265	ECJ0EF1C104Z	C 0.1UF, 16V	
C1266	ECJ0EF1C104Z	C 0.1UF, 16V	
C1267	ECJ0EF1C104Z	C 0.1UF, 16V	
C1268	ECJ0EF1C104Z	C 0.1UF, 16V	
C1269	ECJ0EF1C104Z	C 0.1UF, 16V	
C1270	ECJ0EF1C104Z	C 0.1UF, 16V	
C1271	EEEHB0G101R	E 100UF, 4V	
C1315	ECJ0EF1C104Z	C 0.1UF, 16V	
C1348	ECJ0EF1C104Z	C 0.1UF, 16V	
C1349	ECJ0EF1C104Z	C 0.1UF, 16V	
C1350	ECJ1VC1H100C	C 10PF, 50V	
C1351	ECJ0EF1C104Z	C 0.1UF, 16V	
C1352	ECJ0EF1C104Z	C 0.1UF, 16V	
C1369	ECJ0EF1C104Z	C 0.1UF, 16V	
C1370	ECJ0EF1C104Z	C 0.1UF, 16V	
C1371	F2G1E4R70007	CAPACITOR	
C1373	F2G1E4R70007	CAPACITOR	
C1374	EEEHB1A101P	CAPACITOR	
C1375	EEEHB0G101R	E 100UF, 4V	
C1376	EEEHB0G101R	E 100UF, 4V	
C1378	ECJ0EF1C104Z	C 0.1UF, 16V	
C1379	ECJ2FF1C475Z	CAPACITOR	
C1387	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1401	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1402	ECJ0EB1H102K	C 1000PF, 50V	
C1409	ECJ0EB1H102K	C 1000PF, 50V	
C1430	ECJ0EF1C104Z	C 0.1UF, 16V	
C1431	ECJ0EF1C104Z	C 0.1UF, 16V	
C1432	ECJ0EF1C104Z	C 0.1UF, 16V	
C1433	F2G1E3300010	CAPACITOR	
C1434	F2G1E3300010	CAPACITOR	
C1435	F2G1E3300010	CAPACITOR	
C1436	ECJ0EF1C104Z	C 0.1UF, 16V	
C1437	ECJ0EF1C104Z	C 0.1UF, 16V	
C1438	ECJ0EF1C104Z	C 0.1UF, 16V	
C1439	F2G1E3300010	CAPACITOR	
C1440	F2G1E3300010	CAPACITOR	
C1441	F2G1E3300010	CAPACITOR	
C1442	ECJ0EF1C104Z	C 0.1UF, 16V	
C1443	ECJ0EF1C104Z	C 0.1UF, 16V	
C1444	ECJ0EF1C104Z	C 0.1UF, 16V	
C1445	ECJ1VF1H333Z	C 0.033UF, 50V	
C1446	ECJ0EF1C104Z	C 0.1UF, 16V	
C1447	ECJ0EF1C104Z	C 0.1UF, 16V	
C1448	ECJ0EF1C104Z	C 0.1UF, 16V	
C1449	ECJ0EF1C104Z	C 0.1UF, 16V	
C1450	ECJ0EF1C104Z	C 0.1UF, 16V	
C1451	ECJ0EF1C104Z	C 0.1UF, 16V	
C1452	ECJ0EF1C104Z	C 0.1UF, 16V	
C1453	ECJ0EF1C104Z	C 0.1UF, 16V	
C1454	ECJ0EF1C104Z	C 0.1UF, 16V	
C1455	ECJ0EF1C104Z	C 0.1UF, 16V	
C1456	ECJ0EF1C104Z	C 0.1UF, 16V	
C1457	ECJ0EF1C104Z	C 0.1UF, 16V	
C1458	ECJ0EF1C104Z	C 0.1UF, 16V	
C1459	ECJ0EF1C104Z	C 0.1UF, 16V	
C1460	ECJ0EF1C104Z	C 0.1UF, 16V	
C1461	ECJ0EF1C104Z	C 0.1UF, 16V	
C1462	ECJ0EF1C104Z	C 0.1UF, 16V	
C1463	ECJ0EF1C104Z	C 0.1UF, 16V	
C1464	ECJ0EF1C104Z	C 0.1UF, 16V	
C1465	ECJ0EB1H102K	C 1000PF, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1467	ECJ0EF1C104Z	C 0.1UF, 16V	
C1468	ECJ0EF1C104Z	C 0.1UF, 16V	
C1469	ECJ0EF1C104Z	C 0.1UF, 16V	
C1470	ECJ0EF1C104Z	C 0.1UF, 16V	
C1473	ECJ0EF1C104Z	C 0.1UF, 16V	
C1474	ECJ0EF1C104Z	C 0.1UF, 16V	
C1475	ECJ0EF1C104Z	C 0.1UF, 16V	
C1476	ECJ0EF1C104Z	C 0.1UF, 16V	
C1477	ECJ0EF1C104Z	C 0.1UF, 16V	
C1478	ECJ0EF1C104Z	C 0.1UF, 16V	
C1479	EEEHB0G101R	E 100UF, 4V	
C1480	ECJ0EF1C104Z	C 0.1UF, 16V	
C1481	ECJ0EB1H102K	C 1000PF, 50V	
C1492	ECJ0EF1C104Z	C 0.1UF, 16V	
C1493	F2G0J3300014	CAPACITOR	
C1495	F2G1E3300010	CAPACITOR	
C1497	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1498	ECJ0EF1C104Z	C 0.1UF, 16V	
C1499	ECJ0EF1C104Z	C 0.1UF, 16V	
C1500	ECJ0EF1C104Z	C 0.1UF, 16V	
C1505	ECJ0EF1C104Z	C 0.1UF, 16V	
C1506	ECJ0EF1C104Z	C 0.1UF, 16V	
C1507	F2G1E3300010	CAPACITOR	
C1532	F2G1E3300010	CAPACITOR	
C1533	ECJ1VF1E105Z	CAPACITOR	
C1534	ECJ1VB1H152K	CAPACITOR	
C1535	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1536	ECJ0EF1C104Z	C 0.1UF, 16V	
C1541	ECJ0EF1C104Z	C 0.1UF, 16V	
C1542	ECJ0EF1C104Z	C 0.1UF, 16V	
C1543	ECJ0EF1C104Z	C 0.1UF, 16V	
C1545	ECJ0EF1C104Z	C 0.1UF, 16V	
C1551	EEEHB0G101R	E 100UF, 4V	
C1552	ECJ0EF1C104Z	C 0.1UF, 16V	
C1555	ECJ0EF1C104Z	C 0.1UF, 16V	
C1556	F2G1A3300007	CAPACITOR	
C1581	ECJ0EF1C104Z	C 0.1UF, 16V	
C1591	ECJ0EB1H102K	C 1000PF, 50V	
C1602	ECJ1VC1H221J	CAPACITOR	
C1604	ECJ0EF1C104Z	C 0.1UF, 16V	
C1605	F2G0J4700010	CAPACITOR	
C1606	F2G1C2200010	CAPACITOR	
C1607	ECJ1VF1C474Z	CAPACITOR	
C1608	ECJ1VF1C474Z	CAPACITOR	
C1610	ECJ1VF1E105Z	CAPACITOR	
C1611	ECJ1VF1E105Z	CAPACITOR	
C1613	ECJ1VF1E105Z	CAPACITOR	
C1614	ECJ1VF1E105Z	CAPACITOR	
C1615	ECJ1VF1E105Z	CAPACITOR	
C1616	ECJ1VF1E105Z	CAPACITOR	
C1618	ECJ1VB1H472K	C 4700PF, K, 50V	
C1619	ECJ2VB1C224K	CAPACITOR	
C1620	ECJ2VB1C224K	CAPACITOR	
C1621	ECJ1VF1A225Z	CAPACITOR	
C1622	ECJ0EB1H102K	C 1000PF, 50V	
C1623	ECJ1VB1H821K	CAPACITOR	
C1625	ECJ1VB1H332K	CAPACITOR	
C1626	ECJ0EF1C104Z	C 0.1UF, 16V	
C1627	ECJ1VF1A225Z	CAPACITOR	
C1628	ECJ0EB1H102K	C 1000PF, 50V	
C1629	ECJ0EF1C104Z	C 0.1UF, 16V	
C1630	F2G0J4700010	CAPACITOR	
C1632	ECJ0EB1H102K	C 1000PF, 50V	
C1633	ECJ1VF1A225Z	CAPACITOR	
C1636	ECJ0EB1H102K	C 1000PF, 50V	
C1637	ECJ1VF1A225Z	CAPACITOR	
C1638	ECJ1VF1A225Z	CAPACITOR	
C1639	ECJ0EB1H102K	C 1000PF, 50V	
C1640	ECJ0EB1H102K	C 1000PF, 50V	
C1641	ECJ1VF1A225Z	CAPACITOR	
C1642	ECJ0EB1H102K	C 1000PF, 50V	
C1643	ECJ0EB1H102K	C 1000PF, 50V	
C1644	ECJ1VF1A225Z	CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C1645	ECJ1VF1A225Z	CAPACITOR	
C1646	ECJ0EF1C104Z	C 0.1UF, 16V	
C1647	ECJ0EF1C104Z	C 0.1UF, 16V	
C1648	ECJ0EF1C104Z	C 0.1UF, 16V	
C1649	ECJ0EF1C104Z	C 0.1UF, 16V	
C1650	ECJ0EF1C104Z	C 0.1UF, 16V	
C1651	ECJ0EF1C104Z	C 0.1UF, 16V	
C1652	ECJ0EF1C104Z	C 0.1UF, 16V	
C1653	ECJ0EF1C104Z	C 0.1UF, 16V	
C1654	ECJ0EF1C104Z	C 0.1UF, 16V	
C1655	ECJ0EF1C104Z	C 0.1UF, 16V	
C1656	ECJ0EF1C104Z	C 0.1UF, 16V	
C1657	ECJ0EF1C104Z	C 0.1UF, 16V	
C1658	ECJ0EF1C104Z	C 0.1UF, 16V	
C1659	ECJ0EF1C104Z	C 0.1UF, 16V	
C1660	ECJ0EF1C104Z	C 0.1UF, 16V	
C1661	F2G0J4700010	CAPACITOR	
C1662	ECJ0EF1C104Z	C 0.1UF, 16V	
C1663	F2G0J4700010	CAPACITOR	
C1664	ECJ0EF1C104Z	C 0.1UF, 16V	
C1665	ECJ0EF1C104Z	C 0.1UF, 16V	
C1666	ECJ0EF1C104Z	C 0.1UF, 16V	
C1667	ECJ0EF1C104Z	C 0.1UF, 16V	
C1668	ECJ0EF1C104Z	C 0.1UF, 16V	
C1669	ECJ0EF1C104Z	C 0.1UF, 16V	
C1670	ECJ0EF1C104Z	C 0.1UF, 16V	
C1695	ECJ0EF1C104Z	C 0.1UF, 16V	
C1696	ECJ0EF1C104Z	C 0.1UF, 16V	
C1697	ECJ0EF1C104Z	C 0.1UF, 16V	
C1698	ECJ0EF1C104Z	C 0.1UF, 16V	
C1699	ECJ0EF1C104Z	C 0.1UF, 16V	
C1700	ECJ1VF1A225Z	CAPACITOR	
C1701	ECJ0EF1C104Z	C 0.1UF, 16V	
C2001	ECJ0EF1C104Z	C 0.1UF, 16V	
C2002	ECJ0EF1C104Z	C 0.1UF, 16V	
C2003	ECJ2FF1A106Z	C 10UF, 10V	
C2022	ECJ0EF1C104Z	C 0.1UF, 16V	
C2024	ECJ0EF1C104Z	C 0.1UF, 16V	
C2025	ECJ2FF1A106Z	C 10UF, 10V	
C9101	ECQU2A104MLA	CAPACITOR	⚠
C9102	F1BAH102A024	CAPACITOR	⚠
C9103	F1BAH102A024	CAPACITOR	⚠
C9104	F1BAH221A020	CAPACITOR	⚠
C9105	F1BAH221A020	CAPACITOR	⚠
C9603	F0CZZ4740003	CAPACITOR(B-PCB)	
C9610	F0C2E1050008	CAPACITOR(B-PCB)	
C9617	F0C3C4720003	CAPACITOR	
C9618	F0C2J1540007	CAPACITOR(B-PCB)	
C9619	F0C2J1540007	CAPACITOR(B-PCB)	
[OTHERS]			
A1	K1MY36BA0193	36P CONNECTOR	
A2	K1MY36BA0193	36P CONNECTOR	
A3	K1MY36BA0193	36P CONNECTOR	
A4	K1KA07BA0086	7P CONNECTOR	
A5	K1KA02BA0047	2P CONNECTOR	
A6	K1KA15BA0051	15P CONNECTOR	
A7	K1KA02BA0047	2P CONNECTOR	
A8	K1MY12BA0008	12P CONNECTOR	
A10	K1KA03BA0086	3P CONNECTOR	
A15	K1KA03BA0047	3P CONNECTOR	
A16	K1KA03BA0047	3P CONNECTOR	
A17	K1KA03BA0047	3P CONNECTOR	
A18	K1KA04BA0047	4P CONNECTOR	
A20	K1KA03BA0047	3P CONNECTOR	
A23	K1KA09BA0086	9P CONNECTOR	
A24	K1KA09BA0014	9P CONNECTOR	
H1	K1KA09AA0200	9P CONNECTOR	
H2	K1MY06BA0007	6P CONNECTOR	
K1	K1KA02A00626	2P CONNECTOR	
M1	K1KA06BA0014	6P CONNECTOR	
R1	K1KB07AA0087	7P CONNECTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
S1	K1MN12BA0116	12P CONNECTOR	
S2	K1KA02BA0047	2P CONNECTOR	
S3	K1KA07A00170	7P CONNECTOR	
CF2002	D4CC1103A037	THERMISTOR	
F9101-1	EYF52BCY	FUSE HOLDER	
F9101-2	EYF52BCY	FUSE HOLDER	
F9101	K5D632BNA005	FUSE	⚠
HE2201	B4ABA0000009	HALL DEVICE	
JK1001	K1CB205B0007	S-VIDEO/VIDEO IN TERMINAL	
JK1002	K2HA306B0103	Y PB PR IN	
JK1003	K1FA119E0004	HDMI IN	
JK1005	K1FB115B0102	RGB1 IN TERMINAL	
JK1006	K1CB208BA002	RS232C I/F TERMINAL	
JK9101	K2AZ3B000002	TERMINAL	⚠
JS1004	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1005	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1012	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1013	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1020	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1021	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1022	ERJ6GEY0R00	M 0 OHM,J,1/10W	
PC2001	B3JB00000023	PFOTO COUPLER	
RM2021	B3RAD0000126	REMOTE RECEIVER PLATE	
S9602	A9BZ00000013	SPARK GAP(B-PCB)	
SW2001	EVQPLHA15	SWITCH	
SW2002	EVQPLHA15	SWITCH	
SW2003	EVQPLHA15	SWITCH	
SW2004	EVQPLHA15	SWITCH	
SW2005	EVQPLHA15	SWITCH	
SW2006	EVQPLHA15	SWITCH	
SW2007	EVQPLHA15	SWITCH	
SW2008	EVQPLHA15	SWITCH	
SW2009	EVQPLHA15	SWITCH	
SW9101	K0AAKA000014	SWITCH	⚠
SW9601	K0BDB0000081	SWITCH(B-PCB)	
T9604	G4F3A0000004	TRANS(B-PCB)	⚠
X1001	H0J286500027	CRYSTAL	
X1003	H0J350500001	CRYSTAL	
X1005	H0J829400001	CRYSTAL	
ZA2001	K4CZ01000027	TERMINAL	
ZA2002	K4CZ01000027	TERMINAL	
ZA2021	K4CZ01000027	TERMINAL	
ZA9101	K9ZZ00000424	TERMINAL	
RTL	TNPA4047	CIRCUIT BOARD (K)	
RTL	TNPA4064	CIRCUIT BOARD (S)	
RTL	TNPA4065	CIRCUIT BOARD (H)	
RTL	TNPA4075	CIRCUIT BOARD (R)	
RTL	TNPA4106	CIRCUIT BOARD (M)	
RTL	TXANP01VKD3	CIRCUIT BOARD (A)	
	ETXMM636MCH	POWER UNIT(MACO)	
	TXANP02VKD3	BALLAST UNIT	